DBHYDRO Browser User Documentation

October 10, 2003

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What is DBHYDRO?

"DBHYDRO" is the South Florida Water Management District's (the District) hydrometeorologic, water quality, and hydrogeologic data retrieval system. This corporate database is the source of historical and up-to-date data for the region covered by the District. To produce DBHYDRO, the District participates in a cooperative program with other agencies, such as the U.S. Geological Survey, Everglades National Park, the United States Army Corps of Engineers, Lake Worth Drainage District, and the U.S. Department of Agriculture. DBHYDRO allows users to access over 30,000 station-years of data, collected at over 6000 stations in and around the District. Not only does DBHYDRO contain hydrologic and water quality data, but it also stores additional information about sites, structure characteristics, and stations where data are collected. Accurate descriptions are available for most gauging sites, giving the user information on basin, latitude, longitude, state plane coordinates, quad sheet location, county, section, township, range and many other useful data.

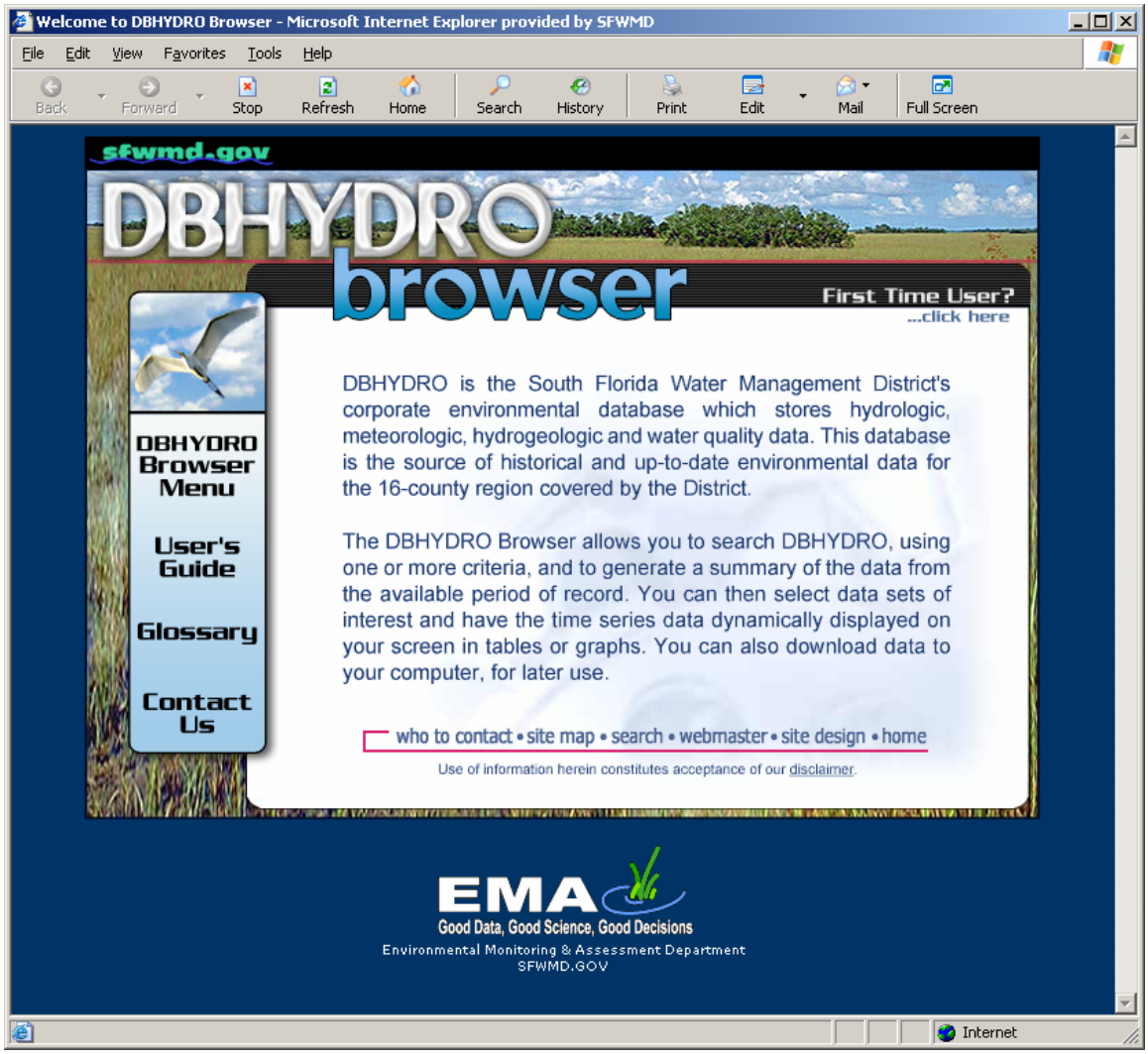
One of the more powerful aspects of DBHYDRO is that data can be retrieved in a variety of ways. It is not necessary to know the identification number (ID) of a particular station, the database can be scanned to locate all stations that meet certain criteria, such as a given basin, county, or coordinate window. The DBHYDRO database has become an important reference for hydrologic and water quality investigations in South Florida. The application that allows users to specify search criteria and retrieve data from DBHYDRO is called “DBHYDRO Browser”.

What is DBHYDRO Browser?

The DBHYDRO Browser is a web-based application that allows users to browse the South Florida Water Management District corporate envriomental database, DBHYDRO, using one or more criteria to generate a summary listing of time series. The user can then select a time series of interest and have the time series data dynamically displayed on their screen in tables or graphs. The technology upon which DBHYDRO Browser is based makes it easier to include your suggestions for improvement. Therefore, your feedback is highly encouraged so that we can incorporate desired functionality.

Getting Started

Internet access is provided for the public at http://www.sfwmd.gov/org/ema/dbhydro

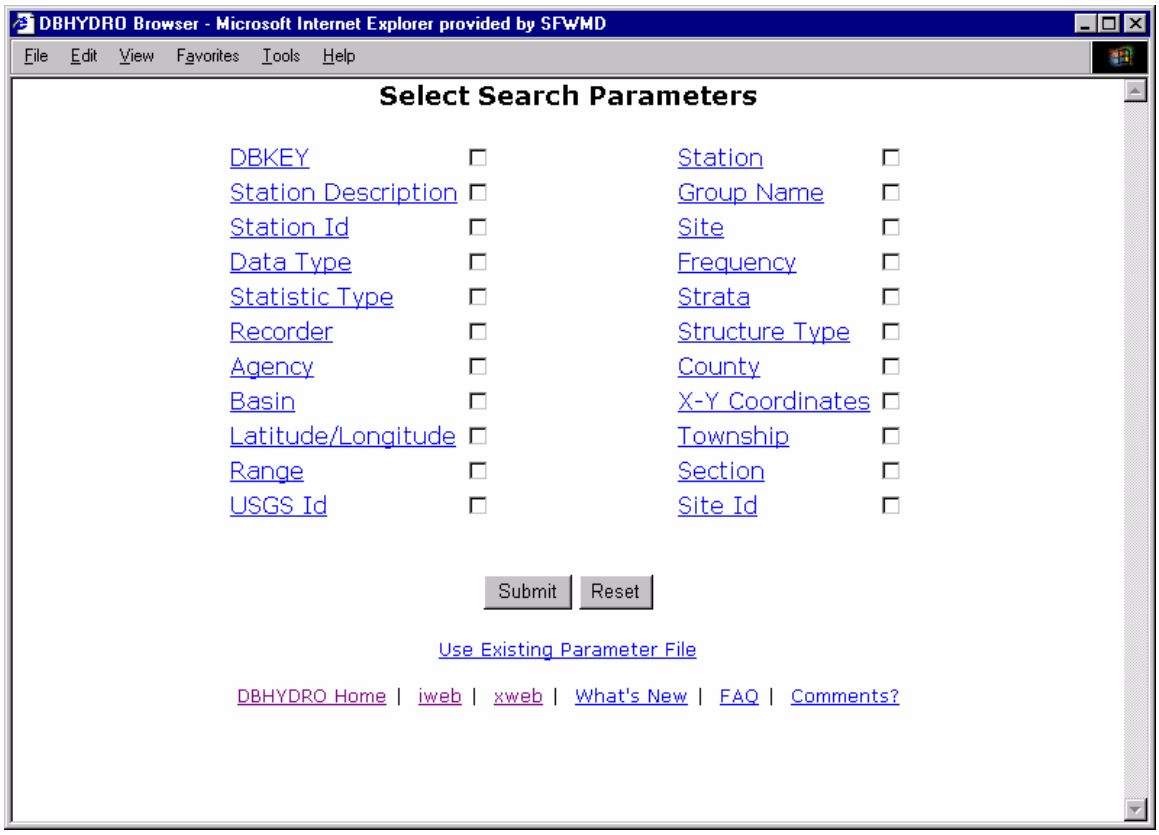


District employees may start the DBHYDRO Browser by first selecting "Business Online" from the District's Home Page on the District's intranet, and then selecting "DBHYDRO Browser".

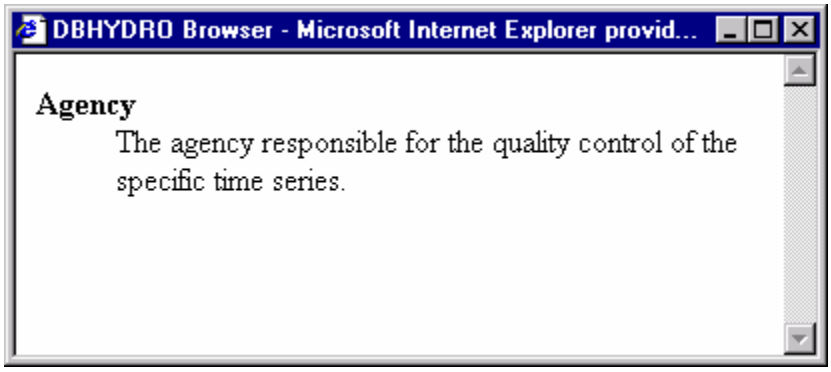
This is the DBHYDRO Browser main page. This page is similar for both internal and external users.

Surface Water and Meteorological Data

Selecting "Surface Water and Meteorological Data" will lead to the following screen: This is where you check off the boxes for the parameters you want to use to filter out which surface water data you care about.

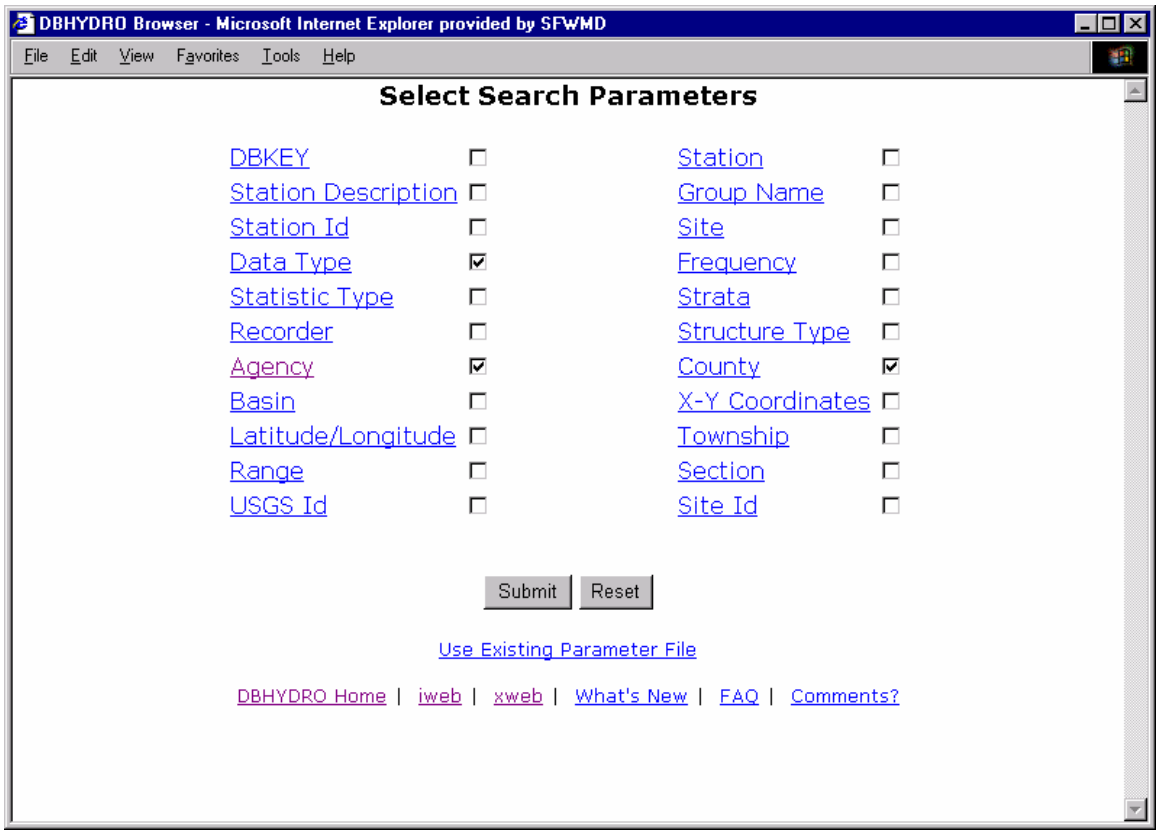


Each parameter is hyperlinked to a textual description of that parameter. For instance, selecting Agency leads to the following help text:

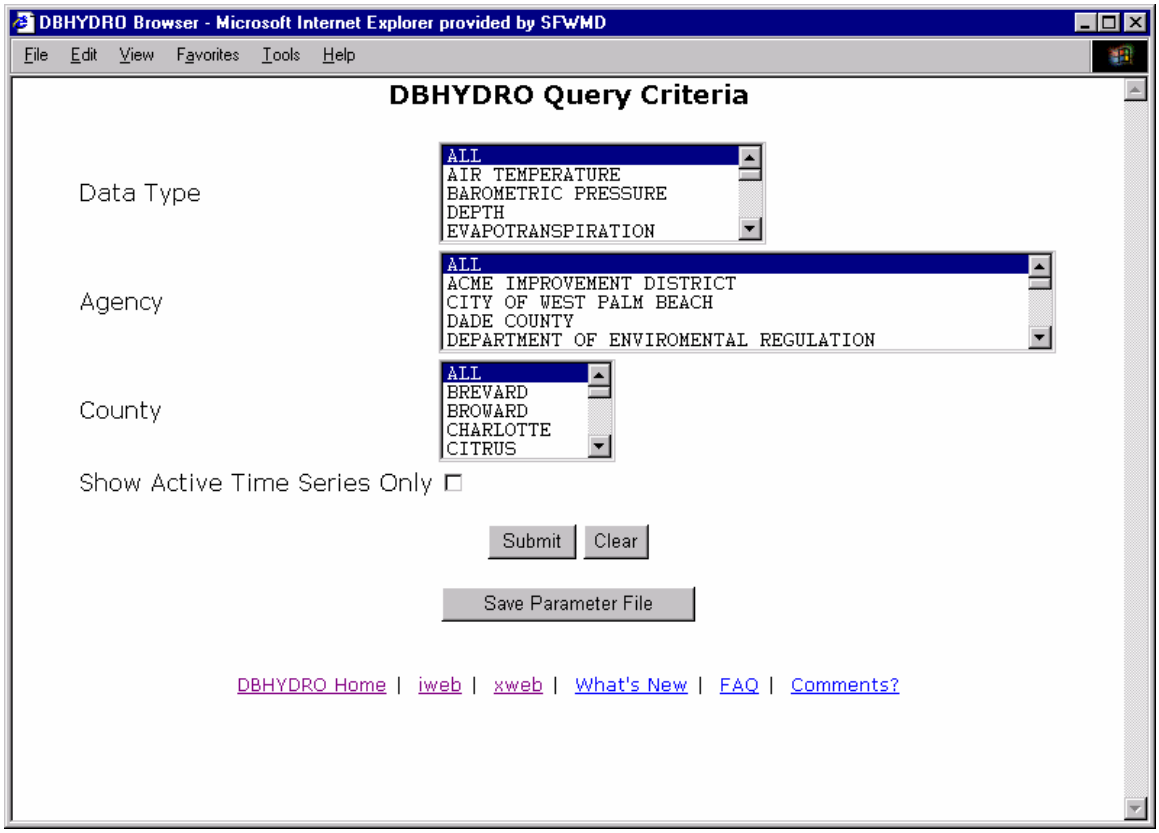


Clicking on the browser's "Back" button returns you to the Select Surface Water Search Parameters menu.

In the following example, the Agency, Data Type, and County parameters have been checked off:

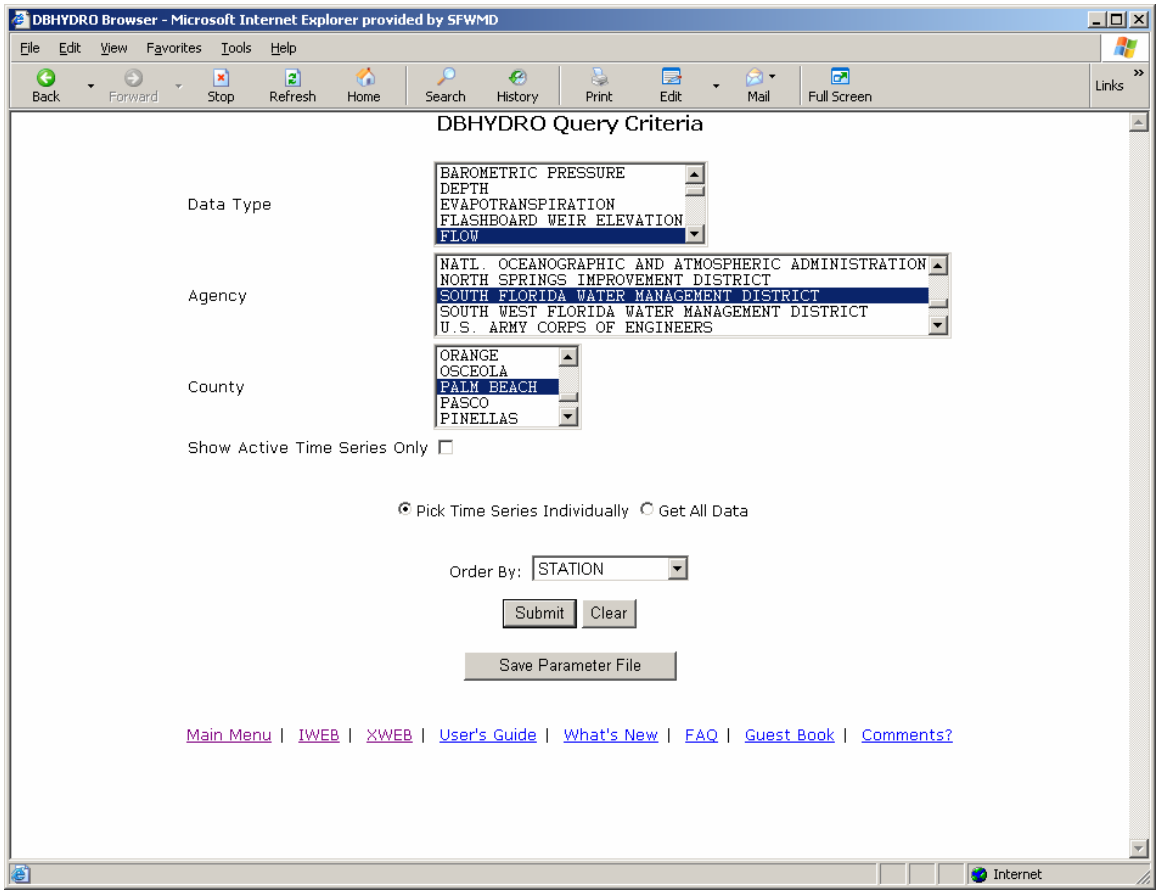


Clicking on the "Submit" button leads to the following screen:



As you can see, only those parameters relevant to surface water or meteorological data can now be queried. This feature helps keep the list of query criteria from getting unnecessarily large and keeps the presented information on one page most of the time. Each list of values allows one or more selections using the CTRL or SHIFT keys in conjunction with the mouse.

The criteria fields are filled in by selecting from the lists of values:

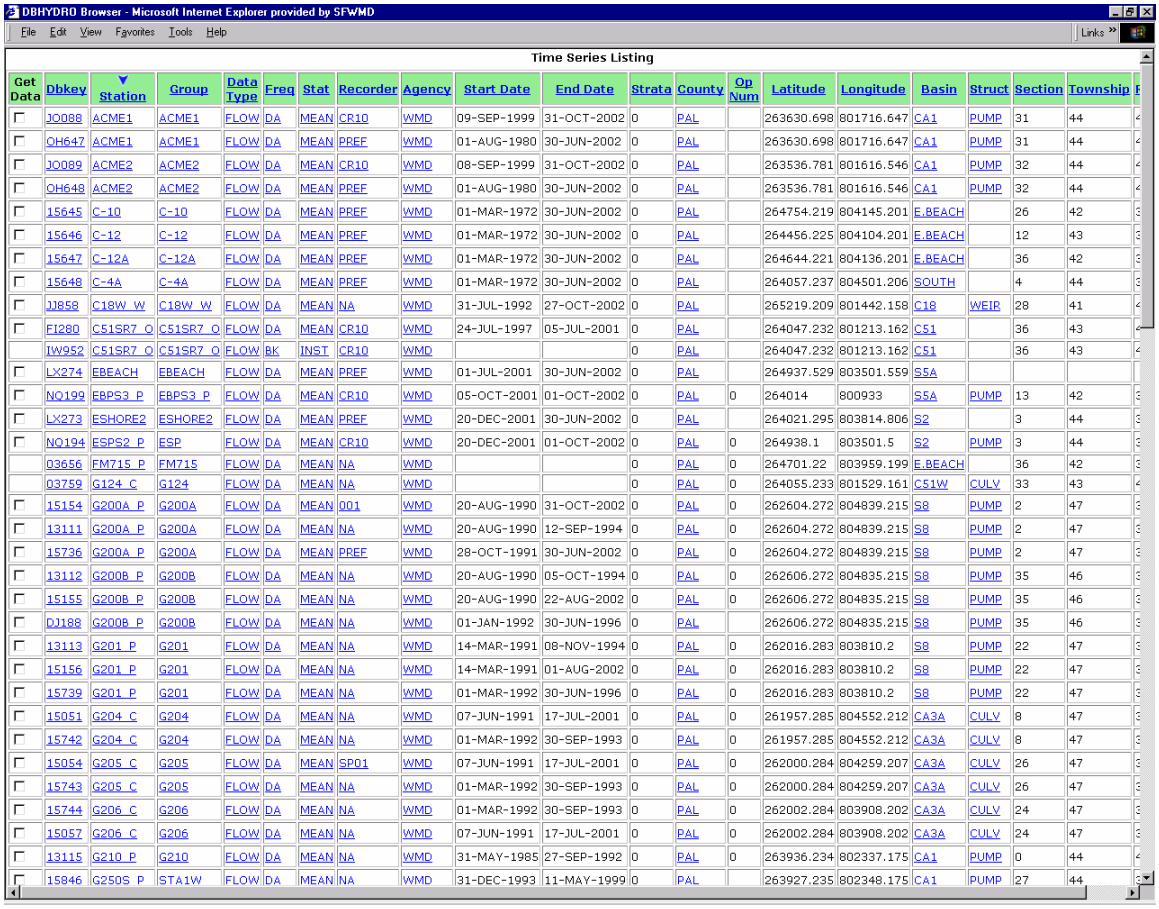


In the above example, SFWMD flows in Palm Beach County are of interest. At this point, one may save a parameter file. The parameter file allows selected criteria to be stored on the user's individual computer such that the criteria may be recalled at any future date. This feature is helpful for frequently run queries to minimize keystrokes and mouse events required to get data.

One may order the subsequent output by any of the available output columns. By default, the output will be output in "Station" order.

Frequent users may wish to bypass the next screen in order to go right to getting data. This technique is useful if you know your query will return only a few data sets interactively or you wish to submit a batch request. More information on batch requests is provided later on. To invoke the bypass feature choose the radio button marked "Get All Data" In our example here, we do not bypass the time series list because we want to pick and choose specific data sets.

Clicking on the "Submit" button results in the following "metadata" list:



DBHYDRO Browser - Microsoft Internet Explorer provided by SFWMD

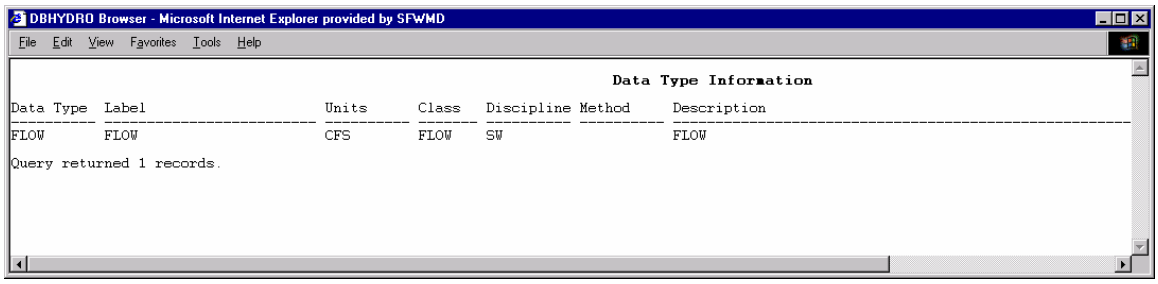
File Edit View Favorites Tools Help Links

Time Series Listing

Get Data	Dbkey	Station	Group	Data Type	Freq	Stat	Recorder	Agency	Start Date	End Date	Strata	County	Op Num	Latitude	Longitude	Basin	Struct	Section	Township
	JO088	ACME1	ACME1	FLOW	DA	MEAN	CR10	WMD	09-SEP-1999	31-OCT-2002	0	PAL		263630.698	801716.647	CA1	PUMP	31	44
	OH647	ACME1	ACME1	FLOW	DA	MEAN	PREF	WMD	01-AUG-1980	30-JUN-2002	0	PAL		263630.698	801716.647	CA1	PUMP	31	44
	JO089	ACME2	ACME2	FLOW	DA	MEAN	CR10	WMD	08-SEP-1999	31-OCT-2002	0	PAL		263536.781	801616.546	CA1	PUMP	32	44
	OH648	ACME2	ACME2	FLOW	DA	MEAN	PREF	WMD	01-AUG-1980	30-JUN-2002	0	PAL		263536.781	801616.546	CA1	PUMP	32	44
	15645	C-10	C-10	FLOW	DA	MEAN	PREF	WMD	01-MAR-1972	30-JUN-2002	0	PAL		264754.219	804145.201	E.BEACH		26	42
	15646	C-12	C-12	FLOW	DA	MEAN	PREF	WMD	01-MAR-1972	30-JUN-2002	0	PAL		264456.225	804104.201	E.BEACH		12	43
	15647	C-12A	C-12A	FLOW	DA	MEAN	PREF	WMD	01-MAR-1972	30-JUN-2002	0	PAL		264644.221	804136.201	E.BEACH		36	42
	15648	C-4A	C-4A	FLOW	DA	MEAN	PREF	WMD	01-MAR-1972	30-JUN-2002	0	PAL		264057.237	804501.206	SOUTH		4	44
	JJ858	C18W_W	C18W_W	FLOW	DA	MEAN	NA	WMD	31-JUL-1992	27-OCT-2002	0	PAL		265219.209	801442.158	C18	WEIR	28	41
	FI280	C51SR7_Q	C51SR7_Q	FLOW	DA	MEAN	CR10	WMD	24-JUL-1997	05-JUL-2001	0	PAL		264047.232	801213.162	C51		36	43
	IW952	C51SR7_Q	C51SR7_Q	FLOW	BK	INST	CR10	WMD			0	PAL		264047.232	801213.162	C51		36	43
	LX274	EBEACH	EBEACH	FLOW	DA	MEAN	PREF	WMD	01-JUL-2001	30-JUN-2002	0	PAL		264937.529	803501.559	S5A			
	NQ199	EBPS3_P	EBPS3_P	FLOW	DA	MEAN	CR10	WMD	05-OCT-2001	01-OCT-2002	0	PAL	0	264014	800933	S5A	PUMP	13	42
	LX273	ESHORE2	ESHORE2	FLOW	DA	MEAN	PREF	WMD	20-DEC-2001	30-JUN-2002	0	PAL		264021.295	803814.806	S2		3	44
	NQ194	ESPS2_P	ESP	FLOW	DA	MEAN	CR10	WMD	20-DEC-2001	01-OCT-2002	0	PAL	0	264938.1	803501.5	S2	PUMP	3	44
	03656	FM715_P	FM715	FLOW	DA	MEAN	NA	WMD			0	PAL	0	264701.22	803959.199	E.BEACH		36	42
	03759	G124_C	G124	FLOW	DA	MEAN	NA	WMD			0	PAL	0	264055.233	801529.161	C51W	CULV	33	43
	15154	G200A_P	G200A	FLOW	DA	MEAN	001	WMD	20-AUG-1990	31-OCT-2002	0	PAL	0	262604.272	804839.215	S8	PUMP	2	47
	13111	G200A_P	G200A	FLOW	DA	MEAN	NA	WMD	20-AUG-1990	12-SEP-1994	0	PAL	0	262604.272	804839.215	S8	PUMP	2	47
	15736	G200A_P	G200A	FLOW	DA	MEAN	PREF	WMD	28-OCT-1991	30-JUN-2002	0	PAL	0	262604.272	804839.215	S8	PUMP	2	47
	13112	G200B_P	G200B	FLOW	DA	MEAN	NA	WMD	20-AUG-1990	05-OCT-1994	0	PAL	0	262606.272	804835.215	S8	PUMP	35	46
	15155	G200B_P	G200B	FLOW	DA	MEAN	NA	WMD	20-AUG-1990	22-AUG-2002	0	PAL	0	262606.272	804835.215	S8	PUMP	35	46
	DJ188	G200B_P	G200B	FLOW	DA	MEAN	NA	WMD	01-JAN-1992	30-JUN-1996	0	PAL		262606.272	804835.215	S8	PUMP	35	46
	13113	G201_P	G201	FLOW	DA	MEAN	NA	WMD	14-MAR-1991	08-NOV-1994	0	PAL	0	262016.283	803810.2	S8	PUMP	22	47
	15156	G201_P	G201	FLOW	DA	MEAN	NA	WMD	14-MAR-1991	01-AUG-2002	0	PAL	0	262016.283	803810.2	S8	PUMP	22	47
	15739	G201_P	G201	FLOW	DA	MEAN	NA	WMD	01-MAR-1992	30-JUN-1996	0	PAL	0	262016.283	803810.2	S8	PUMP	22	47
	15051	G204_C	G204	FLOW	DA	MEAN	NA	WMD	07-JUN-1991	17-JUL-2001	0	PAL	0	261957.285	804552.212	CA3A	CULV	8	47
	15742	G204_C	G204	FLOW	DA	MEAN	NA	WMD	01-MAR-1992	30-SEP-1993	0	PAL	0	261957.285	804552.212	CA3A	CULV	8	47
	15054	G205_C	G205	FLOW	DA	MEAN	SP01	WMD	07-JUN-1991	17-JUL-2001	0	PAL	0	262000.284	804259.207	CA3A	CULV	26	47
	15743	G205_C	G205	FLOW	DA	MEAN	NA	WMD	01-MAR-1992	30-SEP-1993	0	PAL	0	262000.284	804259.207	CA3A	CULV	26	47
	15744	G206_C	G206	FLOW	DA	MEAN	NA	WMD	01-MAR-1992	30-SEP-1993	0	PAL	0	262002.284	803908.202	CA3A	CULV	24	47
	15057	G206_C	G206	FLOW	DA	MEAN	NA	WMD	07-JUN-1991	17-JUL-2001	0	PAL	0	262002.284	803908.202	CA3A	CULV	24	47
	13115	G210_P	G210	FLOW	DA	MEAN	NA	WMD	31-MAY-1985	27-SEP-1992	0	PAL	0	263936.234	802337.175	CA1	PUMP	0	44
	15846	G250S_P	STA1W	FLOW	DA	MEAN	NA	WMD	31-DEC-1993	11-MAY-1999	0	PAL		263927.235	802348.175	CA1	PUMP	27	44

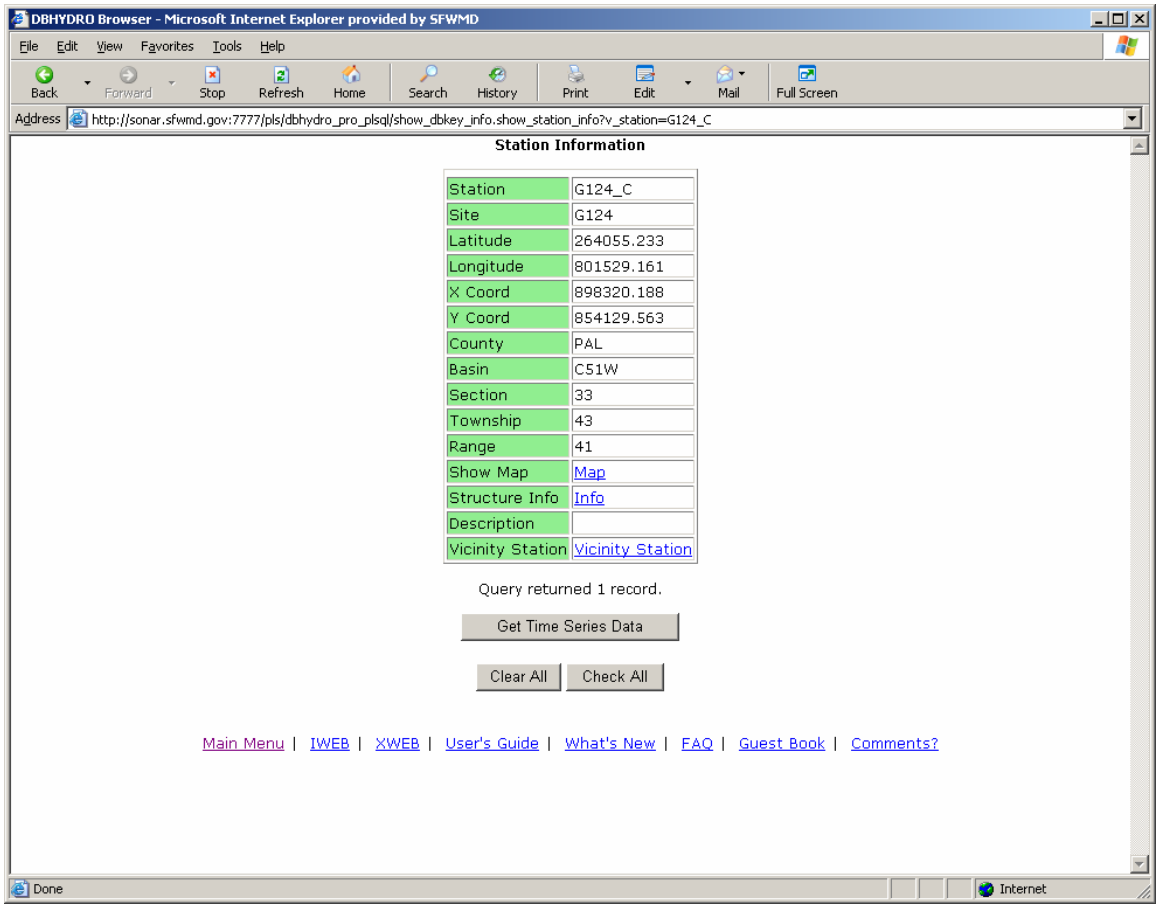
Each of the underlined fields is hyperlinked to additional information that explains its meaning. You can also click on the column heading of any column in order to sort the list by that particular column. The “Station” column is used by default as indicated by the arrow above the column heading.

For instance, clicking on the word "FLOW" in the data type column leads to the following screen that tells us more about what "FLOW" data is:



This behavior is similar for all the other highlighted fields.

One of the more interesting features is the station field link. Selecting a station leads to a screen displaying the station information. Selecting station "G124_C" leads to this screen:

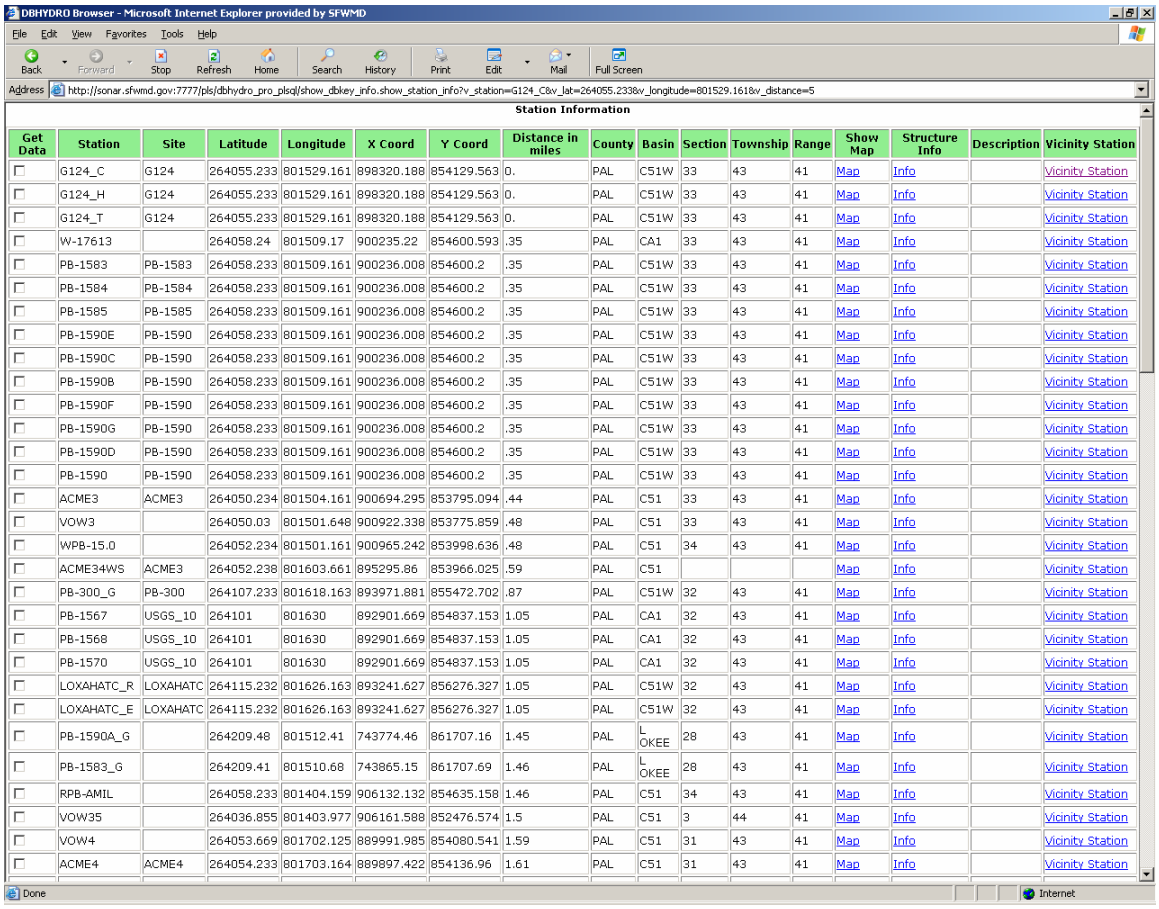


From here we can display a map, go get data, or display structure information about this flow station.

Selecting "Map" leads to the following map display:

Here we are taking advantage of free (and completely legal!) commercial map server technology to learn more about the area near the station of interest. The map can be drawn at different scales (zoom in/out) and printed. General directions to the station can also be generated. The District does not endorse the use of any particular commercial map server engine or its advertisers.

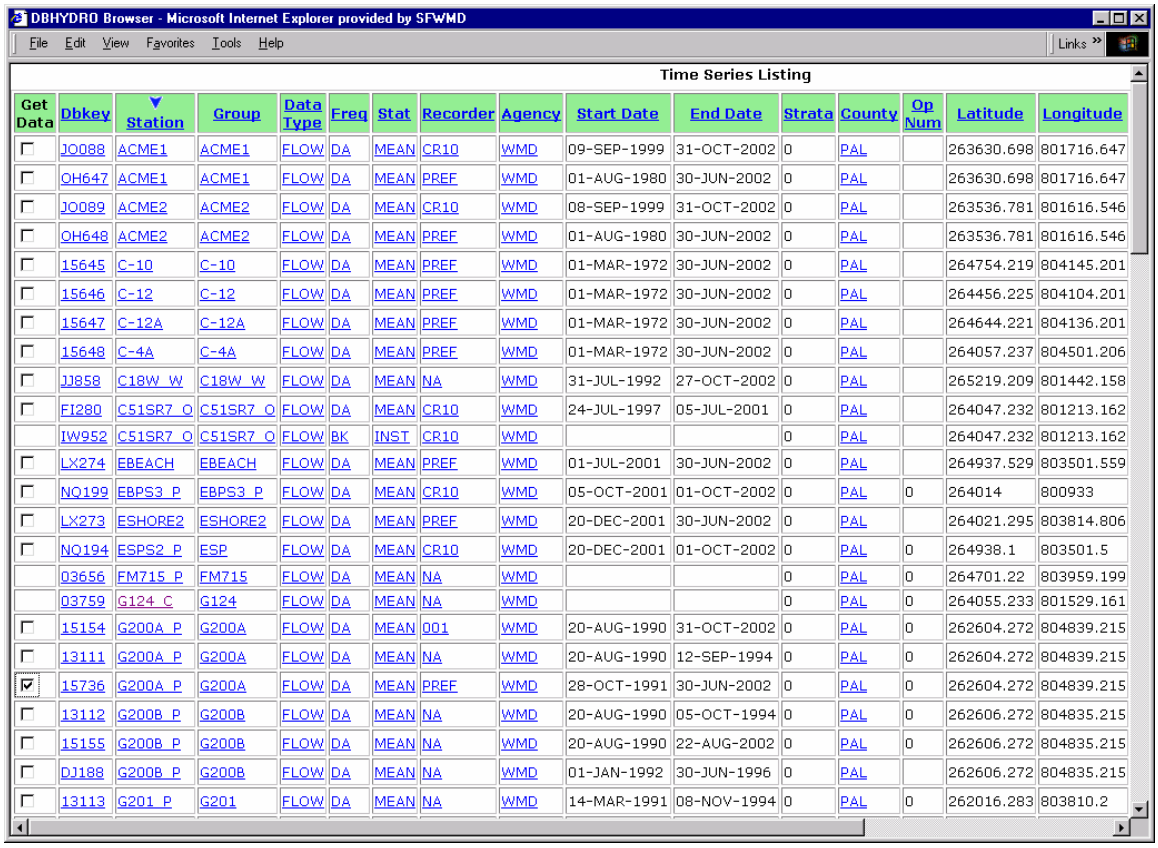
Alternatively, by selecting the "Vicinity Station" link, we can get a list of nearby stations. Such a list may lead us to other data that we, because of previous query criteria, did not realize was present. The column "Distance in miles" tells us how close other stations are to "G124_C".



Station Information

Get Data	Station	Site	Latitude	Longitude	X Coord	Y Coord	Distance in miles	County	Basin	Section	Township	Range	Show Map	Structure Info	Description	Vicinity Station
☐	G124_C	G124	264055.233	801529.161	898320.188	854129.563	0.	PAL	C51W	33	43	41	Map	Info		Vicinity Station
☐	G124_H	G124	264055.233	801529.161	898320.188	854129.563	0.	PAL	C51W	33	43	41	Map	Info		Vicinity Station
☐	G124_T	G124	264055.233	801529.161	898320.188	854129.563	0.	PAL	C51W	33	43	41	Map	Info		Vicinity Station
☐	W-17613		264058.24	801509.17	900235.22	854600.593	.35	PAL	CA1	33	43	41	Map	Info		Vicinity Station
☐	PB-1583	PB-1583	264058.233	801509.161	900236.008	854600.2	.35	PAL	C51W	33	43	41	Map	Info		Vicinity Station
☐	PB-1584	PB-1584	264058.233	801509.161	900236.008	854600.2	.35	PAL	C51W	33	43	41	Map	Info		Vicinity Station
☐	PB-1585	PB-1585	264058.233	801509.161	900236.008	854600.2	.35	PAL	C51W	33	43	41	Map	Info		Vicinity Station
☐	PB-1590E	PB-1590	264058.233	801509.161	900236.008	854600.2	.35	PAL	C51W	33	43	41	Map	Info		Vicinity Station
☐	PB-1590C	PB-1590	264058.233	801509.161	900236.008	854600.2	.35	PAL	C51W	33	43	41	Map	Info		Vicinity Station
☐	PB-1590B	PB-1590	264058.233	801509.161	900236.008	854600.2	.35	PAL	C51W	33	43	41	Map	Info		Vicinity Station
☐	PB-1590F	PB-1590	264058.233	801509.161	900236.008	854600.2	.35	PAL	C51W	33	43	41	Map	Info		Vicinity Station
☐	PB-1590G	PB-1590	264058.233	801509.161	900236.008	854600.2	.35	PAL	C51W	33	43	41	Map	Info		Vicinity Station
☐	PB-1590D	PB-1590	264058.233	801509.161	900236.008	854600.2	.35	PAL	C51W	33	43	41	Map	Info		Vicinity Station
☐	PB-1590	PB-1590	264058.233	801509.161	900236.008	854600.2	.35	PAL	C51W	33	43	41	Map	Info		Vicinity Station
☐	ACME3	ACME3	264050.234	801504.161	900694.295	853795.094	.44	PAL	C51	33	43	41	Map	Info		Vicinity Station
☐	VOW3		264050.03	801501.648	900922.338	853775.859	.48	PAL	C51	33	43	41	Map	Info		Vicinity Station
☐	WPB-15.0		264052.234	801501.161	900965.242	853998.636	.48	PAL	C51	34	43	41	Map	Info		Vicinity Station
☐	ACME34WS	ACME3	264052.238	801603.661	895295.86	853966.025	.59	PAL	C51				Map	Info		Vicinity Station
☐	PB-300_G	PB-300	264107.233	801618.163	893971.881	855472.702	.87	PAL	C51W	32	43	41	Map	Info		Vicinity Station
☐	PB-1567	USGS_10	264101	801630	892901.669	854837.153	1.05	PAL	CA1	32	43	41	Map	Info		Vicinity Station
☐	PB-1568	USGS_10	264101	801630	892901.669	854837.153	1.05	PAL	CA1	32	43	41	Map	Info		Vicinity Station
☐	PB-1570	USGS_10	264101	801630	892901.669	854837.153	1.05	PAL	CA1	32	43	41	Map	Info		Vicinity Station
☐	LOXAHATC_R	LOXAHATC	264115.232	801626.163	893241.627	856276.327	1.05	PAL	C51W	32	43	41	Map	Info		Vicinity Station
☐	LOXAHATC_E	LOXAHATC	264115.232	801626.163	893241.627	856276.327	1.05	PAL	C51W	32	43	41	Map	Info		Vicinity Station
☐	PB-1590A_G		264209.48	801512.41	743774.46	861707.16	1.45	PAL	L OKEE	28	43	41	Map	Info		Vicinity Station
☐	PB-1583_G		264209.41	801510.68	743865.15	861707.69	1.46	PAL	L OKEE	28	43	41	Map	Info		Vicinity Station
☐	RPB-AMIL		264058.233	801404.159	906132.132	854635.158	1.46	PAL	C51	34	43	41	Map	Info		Vicinity Station
☐	VOW35		264036.855	801403.977	906161.588	852476.574	1.5	PAL	C51	3	44	41	Map	Info		Vicinity Station
☐	VOW4		264053.669	801702.125	889991.985	854080.541	1.59	PAL	C51	31	43	41	Map	Info		Vicinity Station
☐	ACME4	ACME4	264054.233	801703.164	889897.422	854136.96	1.61	PAL	C51	31	43	41	Map	Info		Vicinity Station

Click on the "Back" button twice in your browser to return to the Time Series Listing page where you can now select one or more data sets for display. Note that data sets for which there is not yet any data are not selectable.



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☐	OH648	ACME2	ACME2	FLOW	DA	MEAN	PREF	WMD	01-AUG-1980	30-JUN-2002	0	PAL		263536.781	801616.546
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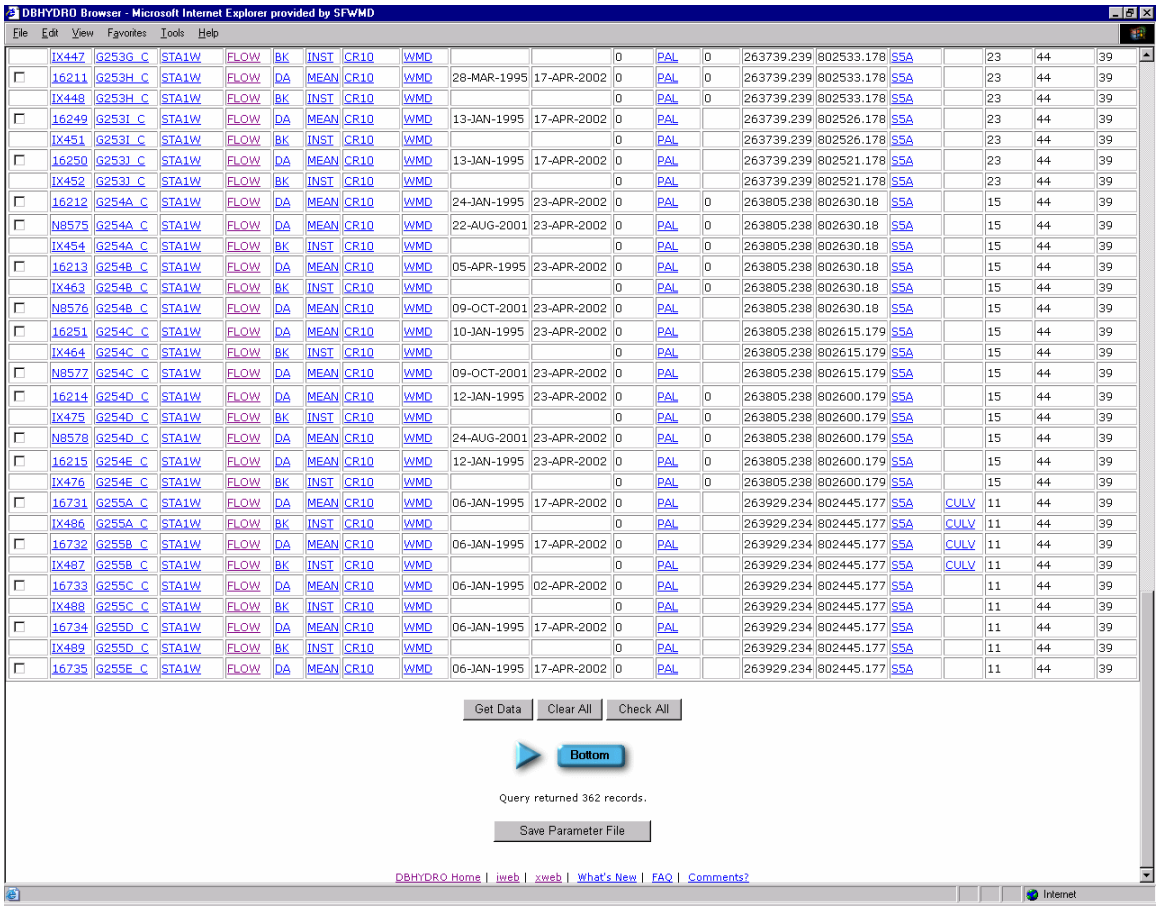
☐	FI280	C51SR7_O	C51SR7_O	FLOW	DA	MEAN	CR10	WMD	24-JUL-1997	05-JUL-2001	0	PAL		264047.232	801213.162
	IW952	C51SR7_O	C51SR7_O	FLOW	BK	INST	CR10	WMD			0	PAL		264047.232	801213.162
☐	LX274	EBEACH	EBEACH	FLOW	DA	MEAN	PREF	WMD	01-JUL-2001	30-JUN-2002	0	PAL		264937.529	803501.559
☐	NQ199	EBPS3_P	EBPS3_P	FLOW	DA	MEAN	CR10	WMD	05-OCT-2001	01-OCT-2002	0	PAL	0	264014	800933
☐	LX273	ESHORE2	ESHORE2	FLOW	DA	MEAN	PREF	WMD	20-DEC-2001	30-JUN-2002	0	PAL		264021.295	803814.806
☐	NQ194	ESPS2_P	ESP	FLOW	DA	MEAN	CR10	WMD	20-DEC-2001	01-OCT-2002	0	PAL	0	264938.1	803501.5
	03656	FM715_P	FM715	FLOW	DA	MEAN	NA	WMD			0	PAL	0	264701.22	803959.199
	03759	G124_C	G124	FLOW	DA	MEAN	NA	WMD			0	PAL	0	264055.233	801529.161
☐	15154	G200A_P	G200A	FLOW	DA	MEAN	001	WMD	20-AUG-1990	31-OCT-2002	0	PAL	0	262604.272	804839.215
☐	13111	G200A_P	G200A	FLOW	DA	MEAN	NA	WMD	20-AUG-1990	12-SEP-1994	0	PAL	0	262604.272	804839.215
☑	15736	G200A_P	G200A	FLOW	DA	MEAN	PREF	WMD	28-OCT-1991	30-JUN-2002	0	PAL	0	262604.272	804839.215
☐	13112	G200B_P	G200B	FLOW	DA	MEAN	NA	WMD	20-AUG-1990	05-OCT-1994	0	PAL	0	262606.272	804835.215
☐	15155	G200B_P	G200B	FLOW	DA	MEAN	NA	WMD	20-AUG-1990	22-AUG-2002	0	PAL	0	262606.272	804835.215
☐	DJ188	G200B_P	G200B	FLOW	DA	MEAN	NA	WMD	01-JAN-1992	30-JUN-1996	0	PAL		262606.272	804835.215
☐	13113	G201_P	G201	FLOW	DA	MEAN	NA	WMD	14-MAR-1991	08-NOV-1994	0	PAL	0	262016.283	803810.2

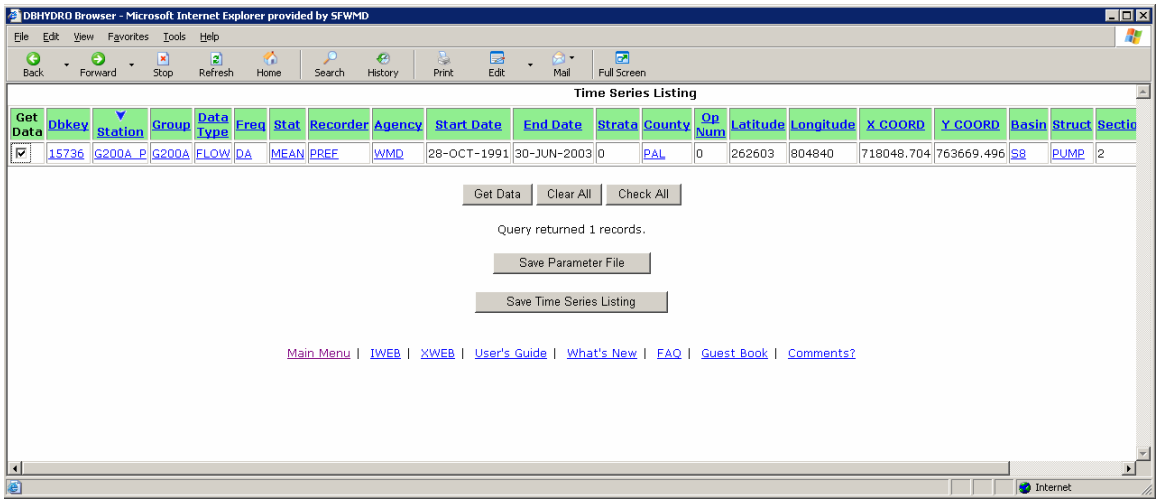
In this example we have indicated we want the data for "G200A_P". We have selected the data set with recorder equal to "PREF" because such data sets undergo an additional level of quality assurance by the engineering staff. Whenever "PREF" data is available for your date range of interest it should be used. Up to 75 rows of metadata will be displayed on each screen. If data from different screens is desired it will have to be fetched separately from one another. Alternatively, one could refine the query so fewer metadata rows are returned such that they all fit on one screen.

Scroll down and click on the "Get Data" button that is displayed at the bottom of the screen.

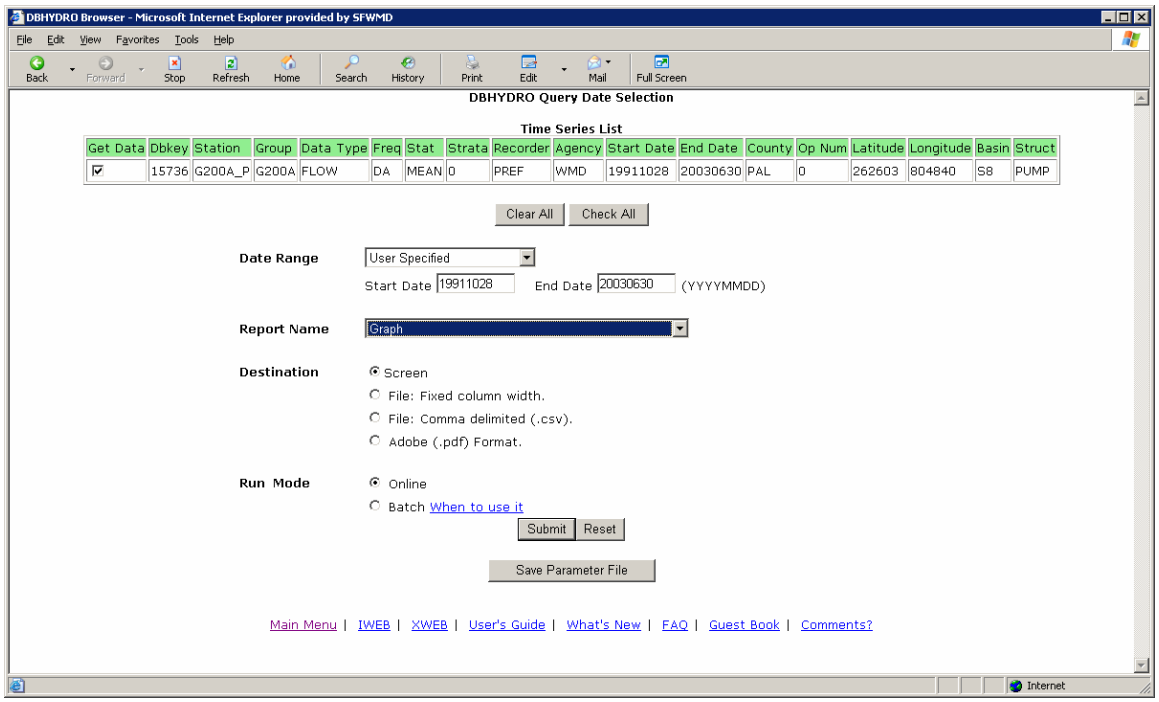


Take notice of the Clear All and Check All buttons that can be used to expedite the time series selection process. Clear All has the effect of removing check marks from all checked time series. Check All has the effect of selecting, or checking all the time series data records. Notice that data sets that have no data are not selectable. A data set may have no data because it is registered in preparation of receiving data but has not received any data yet. Again, a parameter file may be saved at this point in time also.

Once the Get Data button is pressed the date range selection and format selection screen is now displayed:

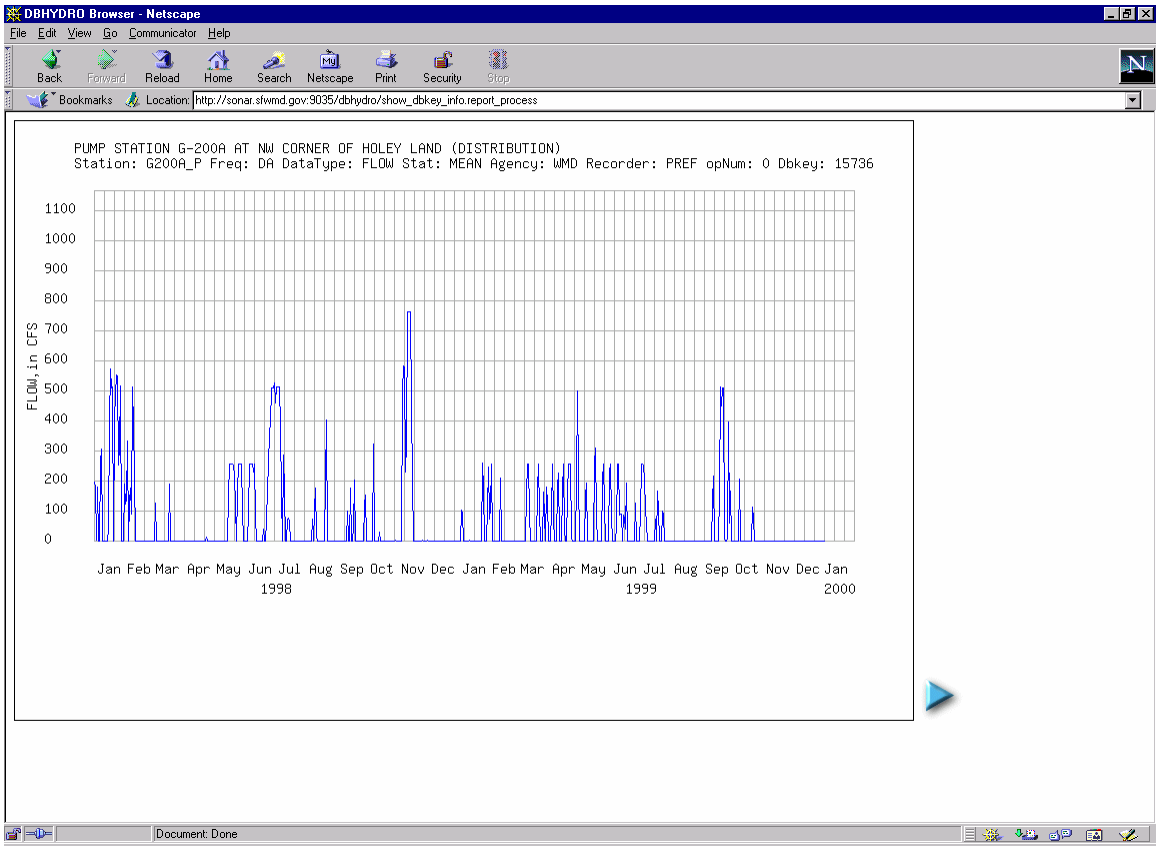


Here we may make our selections to get the period of record for the data set and plot it. As indicated above, the appropriate "radio buttons" have been selected. There are eleven different output formats and four different output destinations.



Plotting

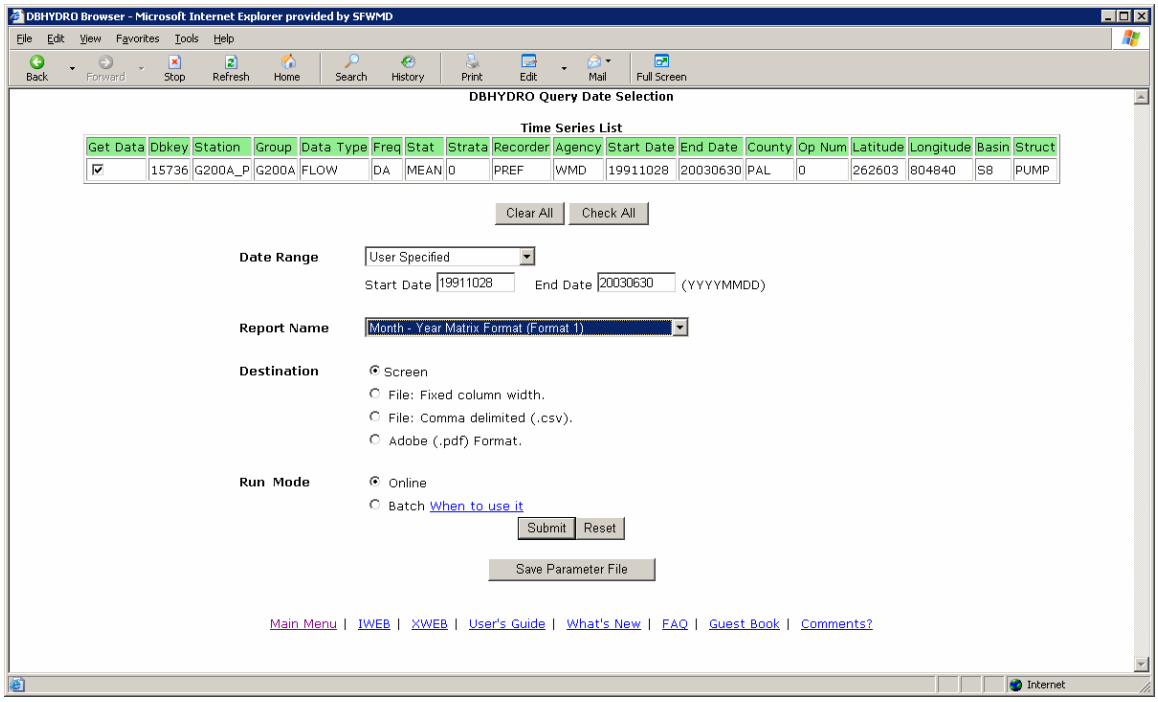
Clicking on the "Submit" button results in the following graph:



This graph is generated directly from the database “on-the-fly. The graph may be printed to any available printer. Make sure to print the graph in landscape mode.

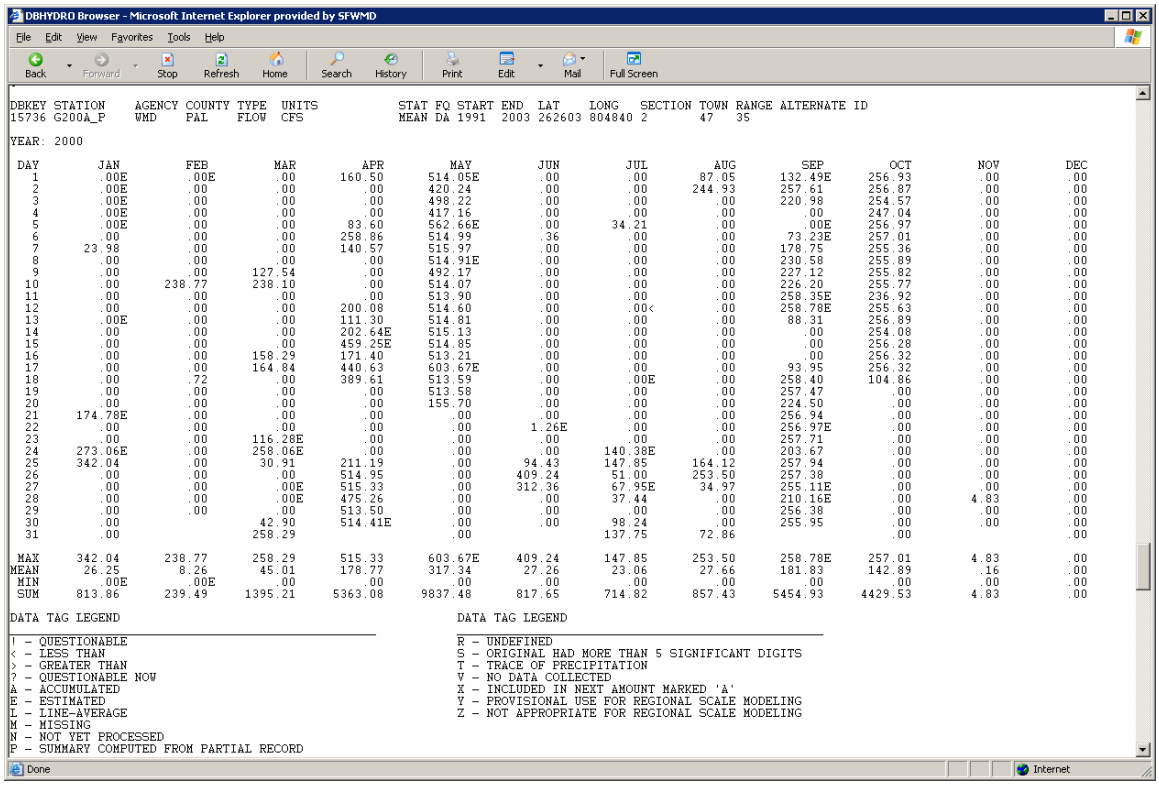
Subsequent years of data may be displayed by clicking on the right arrow button.

Clicking on the "Back" button on your browser and selecting the tabular data option allows us to choose several formats. The example below indicates the user is ready to retrieve data in a “one year per page” tabular report.



Format 1 fits one year of data to a single page in matrix format in which the columns are months of the year and the rows are days of the month. Single Time Series format is a single column output in which each value appears on its own line. Multiple Time Series format is a multi-column output in which the values for multiple time series appear on a single line corresponding to a single date.

This is what you get with one year to a page. Each month is a separate column and each day is a separate row. Each year is a separate section in the output. Monthly summary statistics are at the bottom of each year.



DBHYDRO Browser - Microsoft Internet Explorer provided by SFWMD

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search History Print Edit Mail Full Screen

DBKEY STATION AGENCY COUNTY TYPE UNITS STAT FQ START END LAT LONG SECTION TOWN RANGE ALTERNATE ID
15736 G200A_P WMD PAL FLOW CFS MEAN DA 1991 2003 262603 804840 2 47 35

YEAR: 2000

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	.00E	.00E	.00	160.50	514.05E	.00	.00	87.05	132.49E	256.93	.00	.00
2	.00E	.00	.00	.00	420.24	.00	.00	244.93	257.61	256.87	.00	.00
3	.00E	.00	.00	.00	498.22	.00	.00	.00	220.98	254.57	.00	.00
4	.00E	.00	.00	.00	417.16	.00	.00	.00	.00	247.04	.00	.00
5	.00E	.00	.00	83.60	562.66E	.00	34.21	.00	.00E	256.97	.00	.00
6	.00	.00	.00	258.86	514.99	.36	.00	.00	73.23E	257.01	.00	.00
7	23.98	.00	.00	140.57	515.97	.00	.00	.00	178.75	255.36	.00	.00
8	.00	.00	.00	.00	514.91E	.00	.00	.00	230.58	255.89	.00	.00
9	.00	.00	127.54	.00	492.17	.00	.00	.00	227.12	255.82	.00	.00
10	.00	238.77	238.10	.00	514.07	.00	.00	.00	226.20	255.77	.00	.00
11	.00	.00	.00	.00	513.90	.00	.00	.00	258.35E	236.92	.00	.00
12	.00	.00	.00	200.08	514.60	.00	.00<	.00	258.78E	255.63	.00	.00
13	.00E	.00	.00	111.30	514.81	.00	.00	.00	88.31	256.89	.00	.00
14	.00	.00	.00	202.64E	515.13	.00	.00	.00	.00	254.08	.00	.00
15	.00	.00	.00	459.25E	514.85	.00	.00	.00	.00	256.28	.00	.00
16	.00	.00	158.29	171.40	513.21	.00	.00	.00	.00	256.32	.00	.00
17	.00	.00	164.84	440.63	603.67E	.00	.00	.00	93.95	256.32	.00	.00
18	.00	.72	.00	389.61	513.59	.00	.00E	.00	258.40	104.86	.00	.00
19	.00	.00	.00	.00	513.58	.00	.00	.00	257.47	.00	.00	.00
20	.00	.00	.00	.00	155.70	.00	.00	.00	224.50	.00	.00	.00
21	174.78E	.00	.00	.00	.00	.00	.00	.00	256.94	.00	.00	.00
22	.00	.00	.00	.00	.00	1.26E	.00	.00	256.97E	.00	.00	.00
23	.00	.00	116.28E	.00	.00	.00	.00	.00	257.71	.00	.00	.00
24	273.06E	.00	258.06E	.00	.00	.00	140.38E	.00	203.67	.00	.00	.00
25	342.04	.00	30.91	211.19	.00	94.43	147.85	164.12	257.94	.00	.00	.00
26	.00	.00	.00	514.95	.00	409.24	51.00	253.50	257.38	.00	.00	.00
27	.00	.00	.00E	515.33	.00	312.36	67.95E	34.97	255.11E	.00	.00	.00
28	.00	.00	.00E	475.26	.00	.00	37.44	.00	210.16E	.00	4.83	.00
29	.00	.00	.00	513.50	.00	.00	.00	.00	256.38	.00	.00	.00
30	.00		42.90	514.41E	.00	.00	98.24	.00	255.95	.00	.00	.00
31	.00		258.29		.00		137.75	72.86		.00		.00
MAX	342.04	238.77	258.29	515.33	603.67E	409.24	147.85	253.50	258.78E	257.01	4.83	.00
MEAN	26.25	8.26	45.01	178.77	317.34	27.26	23.06	27.66	181.83	142.89	.16	.00
MIN	.00E	.00E	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
SUM	813.86	239.49	1395.21	5363.08	9837.48	817.65	714.82	857.43	5454.93	4429.53	4.83	.00

DATA TAG LEGEND

! - QUESTIONABLE
< - LESS THAN
> - GREATER THAN
? - QUESTIONABLE NOW
A - ACCUMULATED
E - ESTIMATED
L - LINE-AVERAGE
M - MISSING
N - NOT YET PROCESSED
P - SUMMARY COMPUTED FROM PARTIAL RECORD

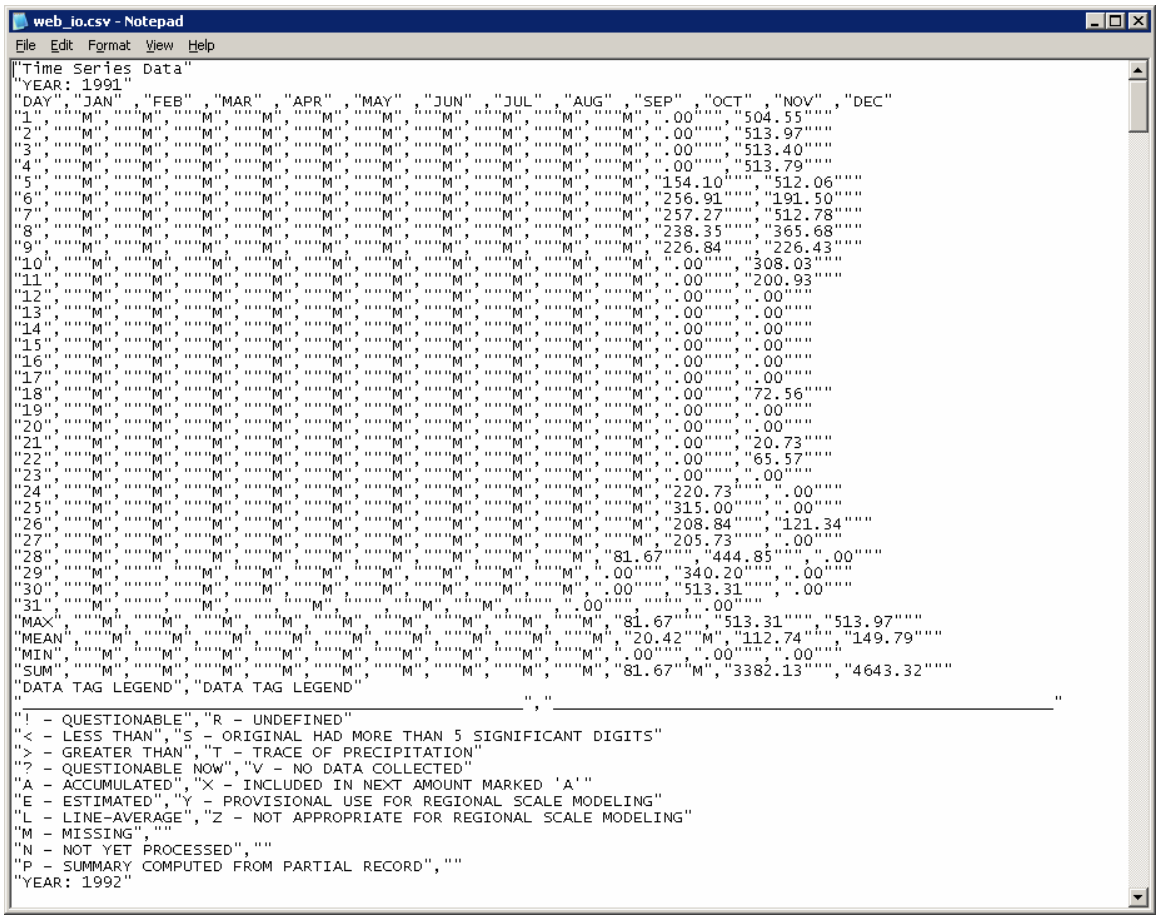
DATA TAG LEGEND

R - UNDEFINED
S - ORIGINAL HAD MORE THAN 5 SIGNIFICANT DIGITS
T - TRACE OF PRECIPITATION
V - NO DATA COLLECTED
X - INCLUDED IN NEXT AMOUNT MARKED 'A'
Y - PROVISIONAL USE FOR REGIONAL SCALE MODELING
Z - NOT APPROPRIATE FOR REGIONAL SCALE MODELING

Done Internet

This output can be saved explicitly as a .txt file using File →Save As or one may choose Edit →Select All and paste the information into another application.

The file may also be saved in comma separated variable (.csv) format and opened in a program such as Notepad or imported into a spreadsheet program like Microsoft Excel:



web_io.csv - Notepad

File Edit Format View Help

```
"Time Series Data"
"YEAR: 1991"
"DAY","JAN","FEB","MAR","APR","MAY","JUN","JUL","AUG","SEP","OCT","NOV","DEC"
"1","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""","504.55"""
"2","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""","513.97"""
"3","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""","513.40"""
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"5","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","154.10""","512.06"""
"6","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","256.91""","191.50"""
"7","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","257.27""","512.78"""
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"10","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""","308.03"""
"11","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""","200.93"""
"12","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""",".00"""
"13","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""",".00"""
"14","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""",".00"""
"15","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""",".00"""
"16","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""",".00"""
"17","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""",".00"""
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"20","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""",".00"""
"21","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""","20.73"""
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"23","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""",".00"""
"24","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","220.73""",".00"""
"25","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","315.00""",".00"""
"26","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","208.84""","121.34"""
"27","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","205.73""",".00"""
"28","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","81.67""","444.85""",".00"""
"29","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""","340.20""",".00"""
"30","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""","513.31""",".00"""
"31","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""",".00"""
"MAX","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","81.67""","513.31""","513.97"""
"MEAN","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","20.42""M","112.74""","149.79"""
"MIN","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""","""M""",".00""",".00""",".00"""
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"DATA TAG LEGEND","DATA TAG LEGEND"
"_____","_____"
"! - QUESTIONABLE","R - UNDEFINED"
"< - LESS THAN","S - ORIGINAL HAD MORE THAN 5 SIGNIFICANT DIGITS"
"> - GREATER THAN","T - TRACE OF PRECIPITATION"
"? - QUESTIONABLE NOW","V - NO DATA COLLECTED"
"A - ACCUMULATED","X - INCLUDED IN NEXT AMOUNT MARKED 'A'"
"E - ESTIMATED","Y - PROVISIONAL USE FOR REGIONAL SCALE MODELING"
"L - LINE-AVERAGE","Z - NOT APPROPRIATE FOR REGIONAL SCALE MODELING"
"M - MISSING",""
"N - NOT YET PROCESSED",""
"P - SUMMARY COMPUTED FROM PARTIAL RECORD",""
"YEAR: 1992"
```
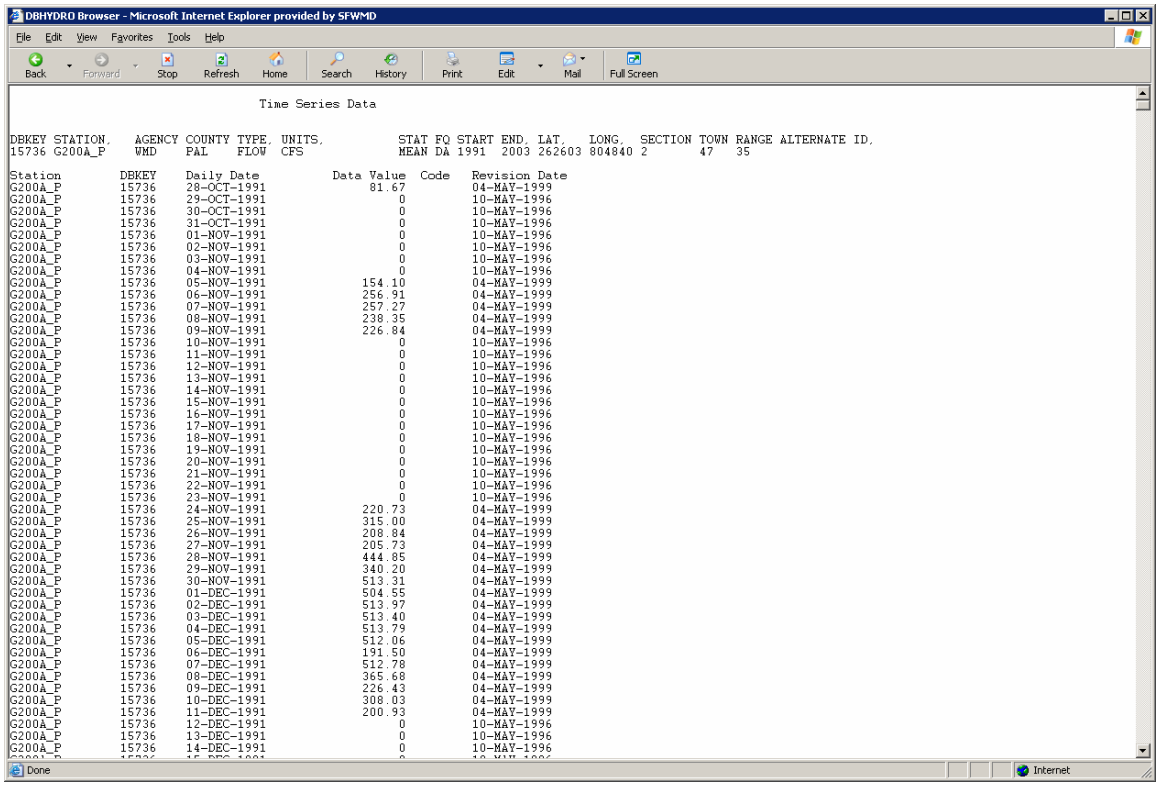

Single Time Series format is as follows:



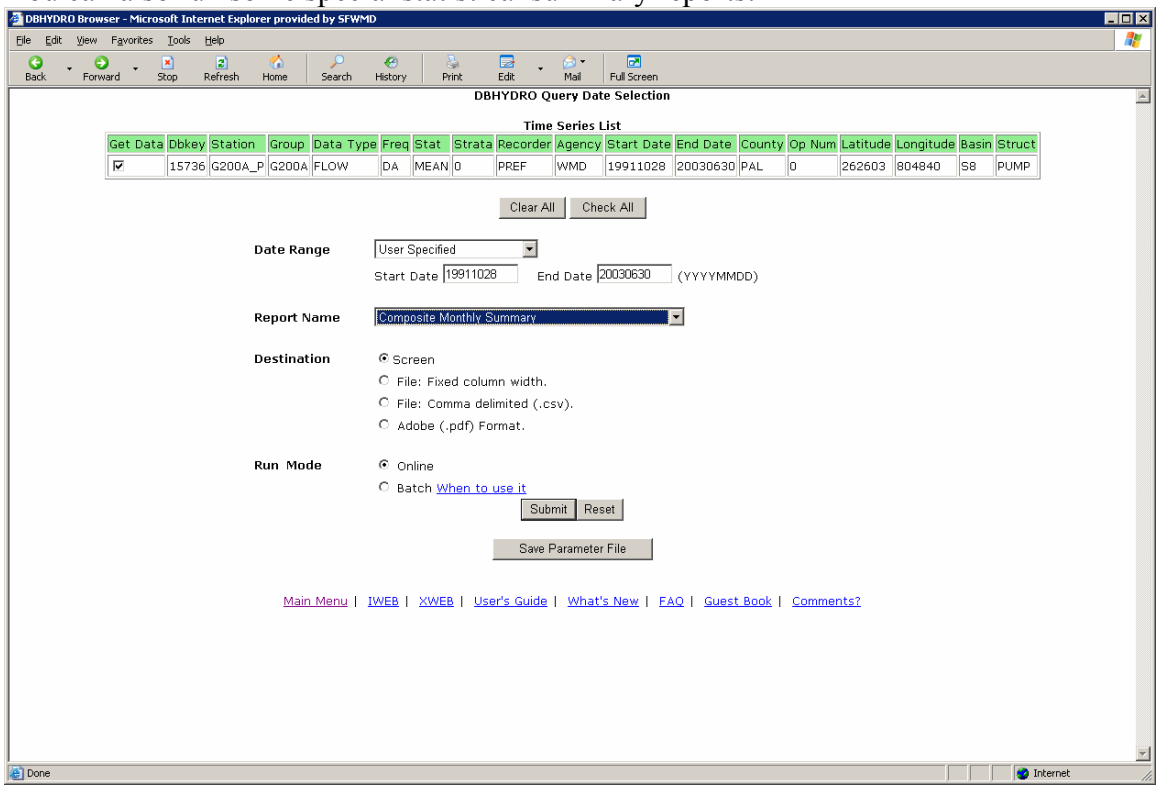
Time Series Data

DBKEY	STATION	AGENCY	COUNTY	TYPE	UNITS	STAT	FQ	START	END	LAT	LONG	SECTION	TOWN	RANGE	ALTERNATE ID
15736	G200A_P	WMD	PAL	FLOW	CFS	MEAN	DA	1991	2003	262603	804840	2	47	35	

Station	DBKEY	Daily Date	Data Value	Code	Revision Date
G200A_P	15736	28-OCT-1991	81.67		04-MAY-1999
G200A_P	15736	29-OCT-1991	0		10-MAY-1996
G200A_P	15736	30-OCT-1991	0		10-MAY-1996
G200A_P	15736	31-OCT-1991	0		10-MAY-1996
G200A_P	15736	01-NOV-1991	0		10-MAY-1996
G200A_P	15736	02-NOV-1991	0		10-MAY-1996
G200A_P	15736	03-NOV-1991	0		10-MAY-1996
G200A_P	15736	04-NOV-1991	0		10-MAY-1996
G200A_P	15736	05-NOV-1991	154.10		04-MAY-1999
G200A_P	15736	06-NOV-1991	256.91		04-MAY-1999
G200A_P	15736	07-NOV-1991	257.27		04-MAY-1999
G200A_P	15736	08-NOV-1991	238.35		04-MAY-1999
G200A_P	15736	09-NOV-1991	226.84		04-MAY-1999
G200A_P	15736	10-NOV-1991	0		10-MAY-1996
G200A_P	15736	11-NOV-1991	0		10-MAY-1996
G200A_P	15736	12-NOV-1991	0		10-MAY-1996
G200A_P	15736	13-NOV-1991	0		10-MAY-1996
G200A_P	15736	14-NOV-1991	0		10-MAY-1996
G200A_P	15736	15-NOV-1991	0		10-MAY-1996
G200A_P	15736	16-NOV-1991	0		10-MAY-1996
G200A_P	15736	17-NOV-1991	0		10-MAY-1996
G200A_P	15736	18-NOV-1991	0		10-MAY-1996
G200A_P	15736	19-NOV-1991	0		10-MAY-1996
G200A_P	15736	20-NOV-1991	0		10-MAY-1996
G200A_P	15736	21-NOV-1991	0		10-MAY-1996
G200A_P	15736	22-NOV-1991	0		10-MAY-1996
G200A_P	15736	23-NOV-1991	0		10-MAY-1996
G200A_P	15736	24-NOV-1991	220.73		04-MAY-1999
G200A_P	15736	25-NOV-1991	315.00		04-MAY-1999
G200A_P	15736	26-NOV-1991	208.84		04-MAY-1999
G200A_P	15736	27-NOV-1991	205.73		04-MAY-1999
G200A_P	15736	28-NOV-1991	444.85		04-MAY-1999
G200A_P	15736	29-NOV-1991	340.20		04-MAY-1999
G200A_P	15736	30-NOV-1991	513.31		04-MAY-1999
G200A_P	15736	01-DEC-1991	504.55		04-MAY-1999
G200A_P	15736	02-DEC-1991	513.97		04-MAY-1999
G200A_P	15736	03-DEC-1991	513.40		04-MAY-1999
G200A_P	15736	04-DEC-1991	513.79		04-MAY-1999
G200A_P	15736	05-DEC-1991	512.06		04-MAY-1999
G200A_P	15736	06-DEC-1991	191.50		04-MAY-1999
G200A_P	15736	07-DEC-1991	512.78		04-MAY-1999
G200A_P	15736	08-DEC-1991	365.68		04-MAY-1999
G200A_P	15736	09-DEC-1991	226.43		04-MAY-1999
G200A_P	15736	10-DEC-1991	308.03		04-MAY-1999
G200A_P	15736	11-DEC-1991	200.93		04-MAY-1999
G200A_P	15736	12-DEC-1991	0		10-MAY-1996
G200A_P	15736	13-DEC-1991	0		10-MAY-1996
G200A_P	15736	14-DEC-1991	0		10-MAY-1996

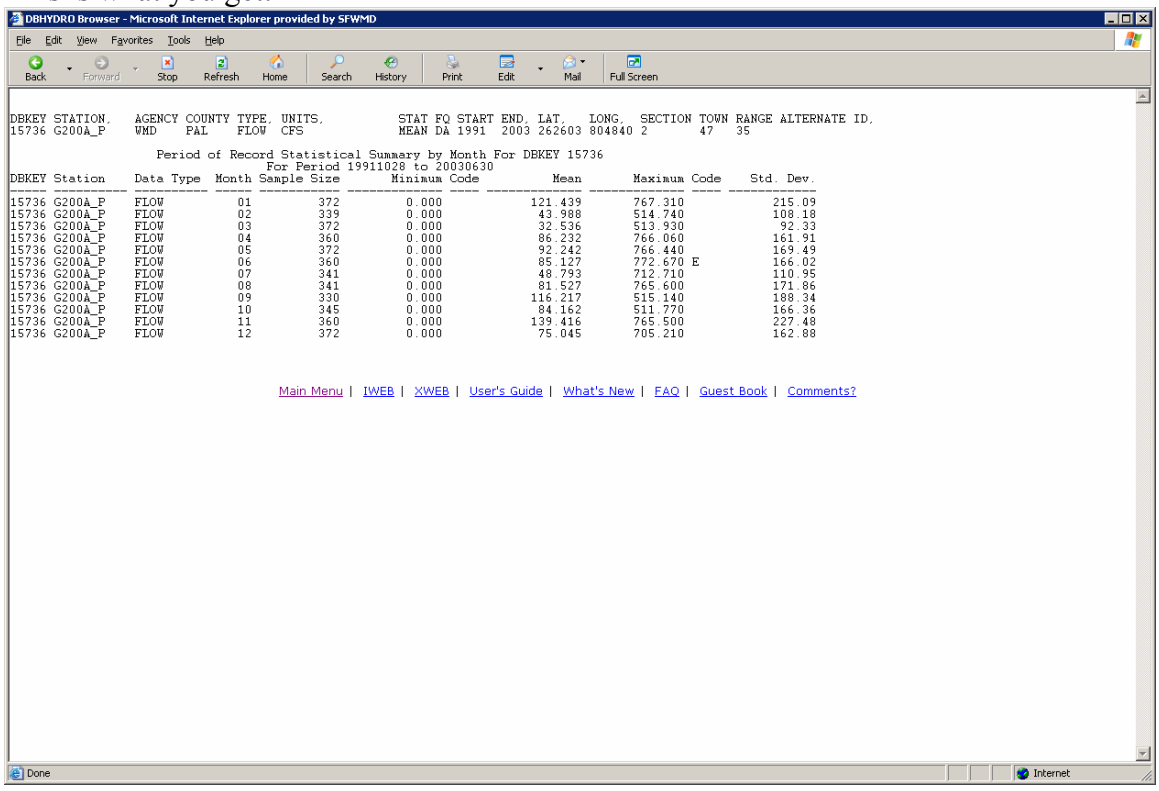
Format 7 (not shown) provides for multiple simultaneous time series values to be displayed on the same row (date/time stamp).
Format 8 (not shown) provides data in Standard Hydrologic Exchange (SHEF) .E format.

You can also run some special statistical summary reports:



A composite monthly summary for the entire period of record for the "PREF"erred flow data at G200A_P is about to be performed. PREF data is data that has undergone a second level of QA/QC by engineers in Environmental Monitoring and Assessment Division. PREF data, whenever available, should be used to the exclusion of all other data.

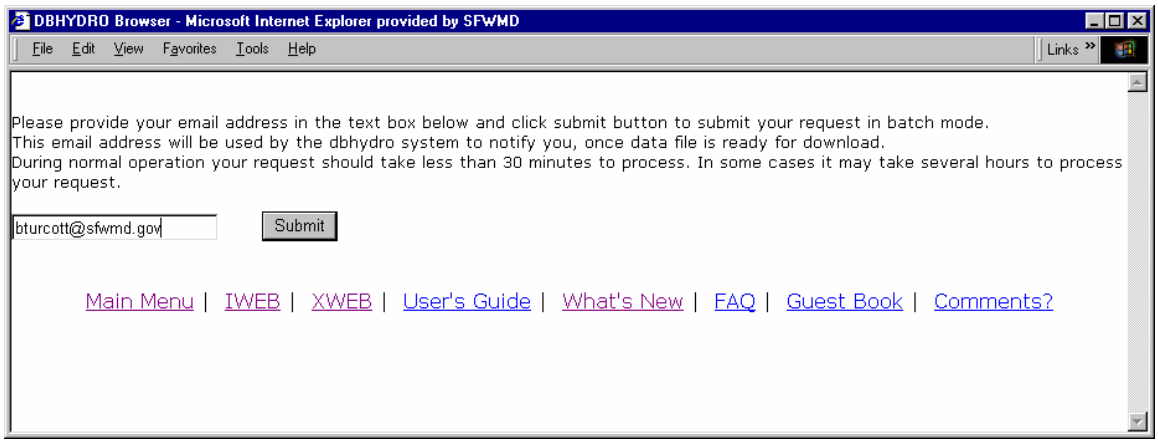
This is what you get:



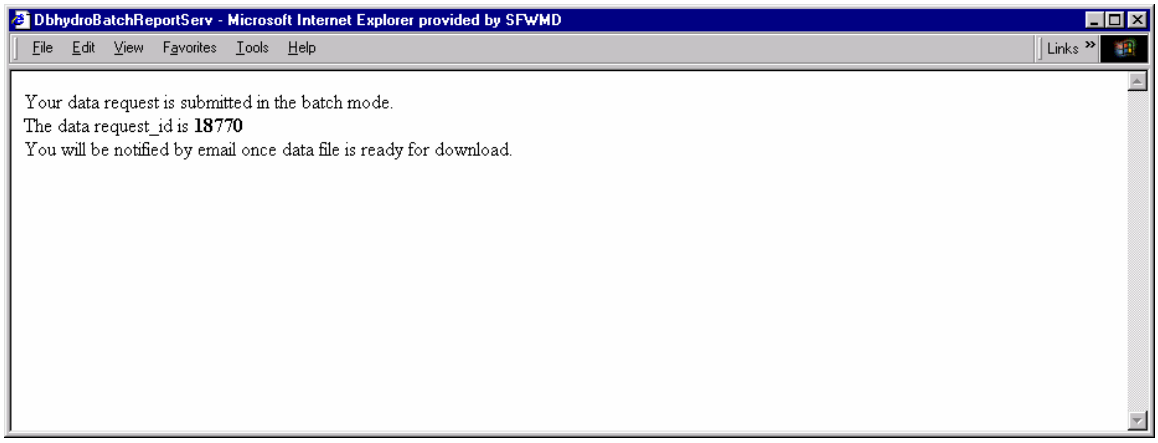
This can be very handy when trying to detect seasonal trends in the data.
Other special summary reports are available too.
Try them out.

Batch Mode

Choosing Batch Mode as the Run Mode allows you to retrieve large data sets in an "off-line manner. That is you do not have to wait at the computer "twiddling your thumbs" waiting for the data. The data request is submitted. You will then receive an email when the data request is done. The email has a hyperlink in it that will allow you to download the file via FTP.



Enter your email address (carefully) and press submit.

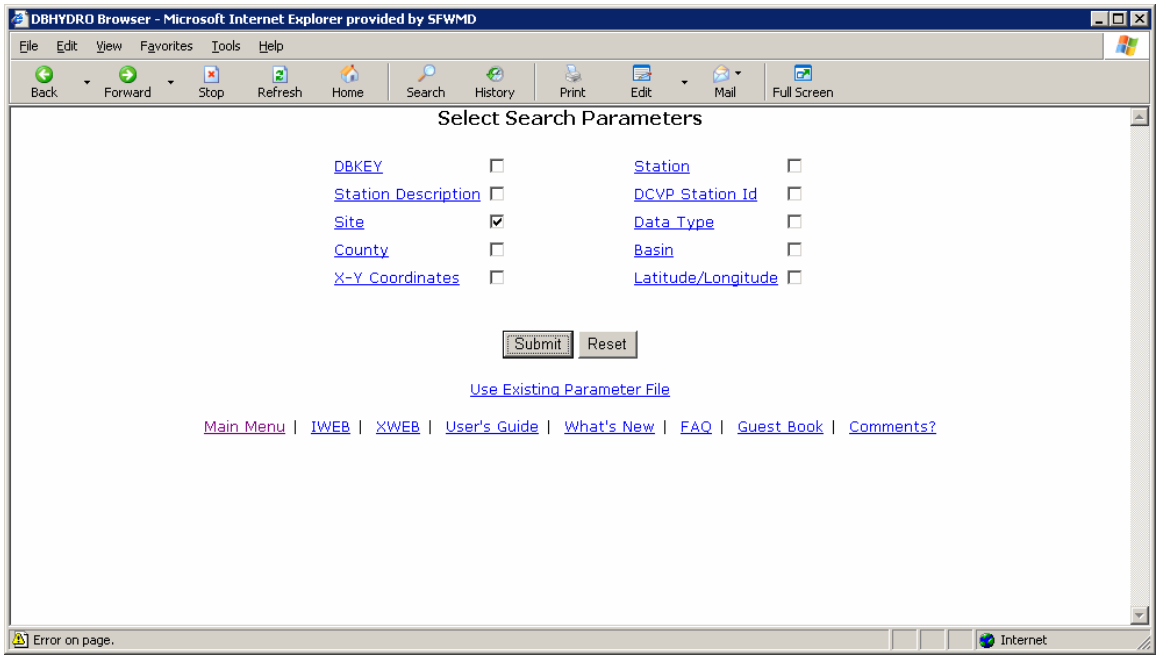


You will receive an email similar to the following:

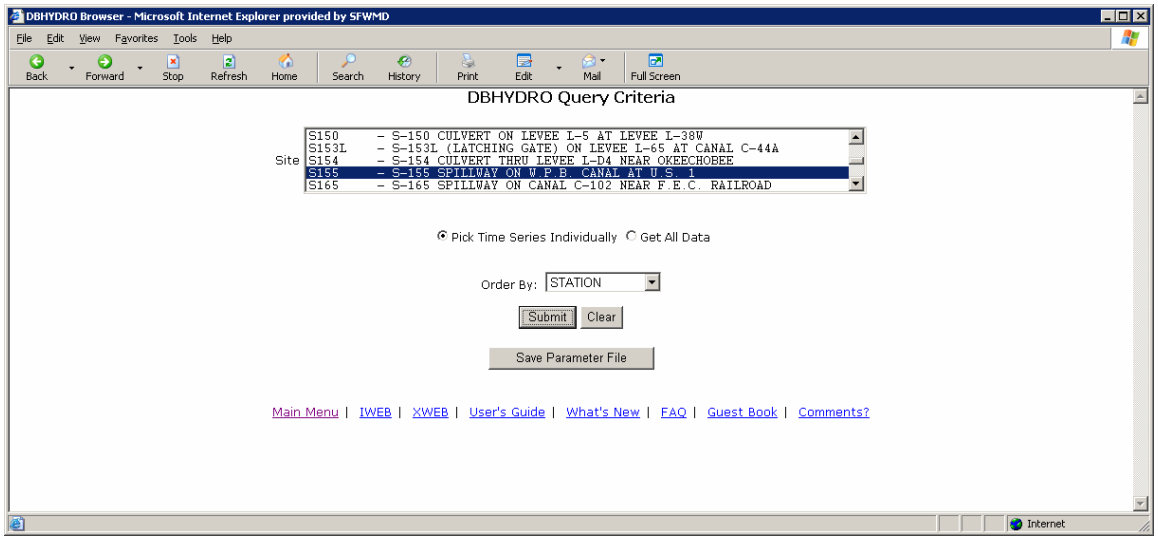
Real Time Data

Choose Real Time Data from the main menu. This option is presently only available on the SFWMD intranet.

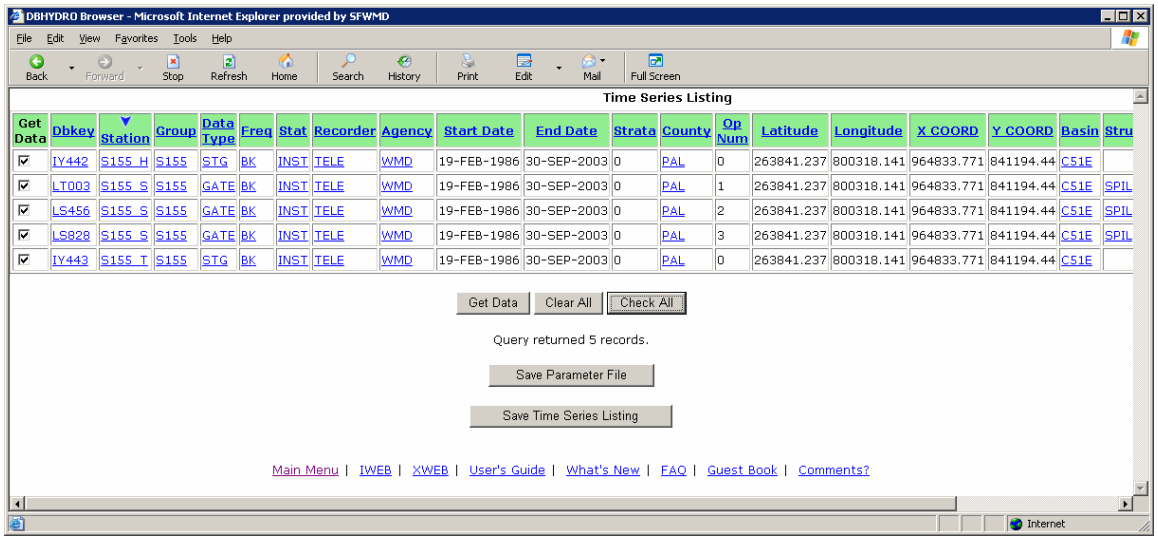
Real time stages and water control structure operations are available also. For instance, if one has interest in real-time data at the S155 spillway, one check the Site box and select "Submit"



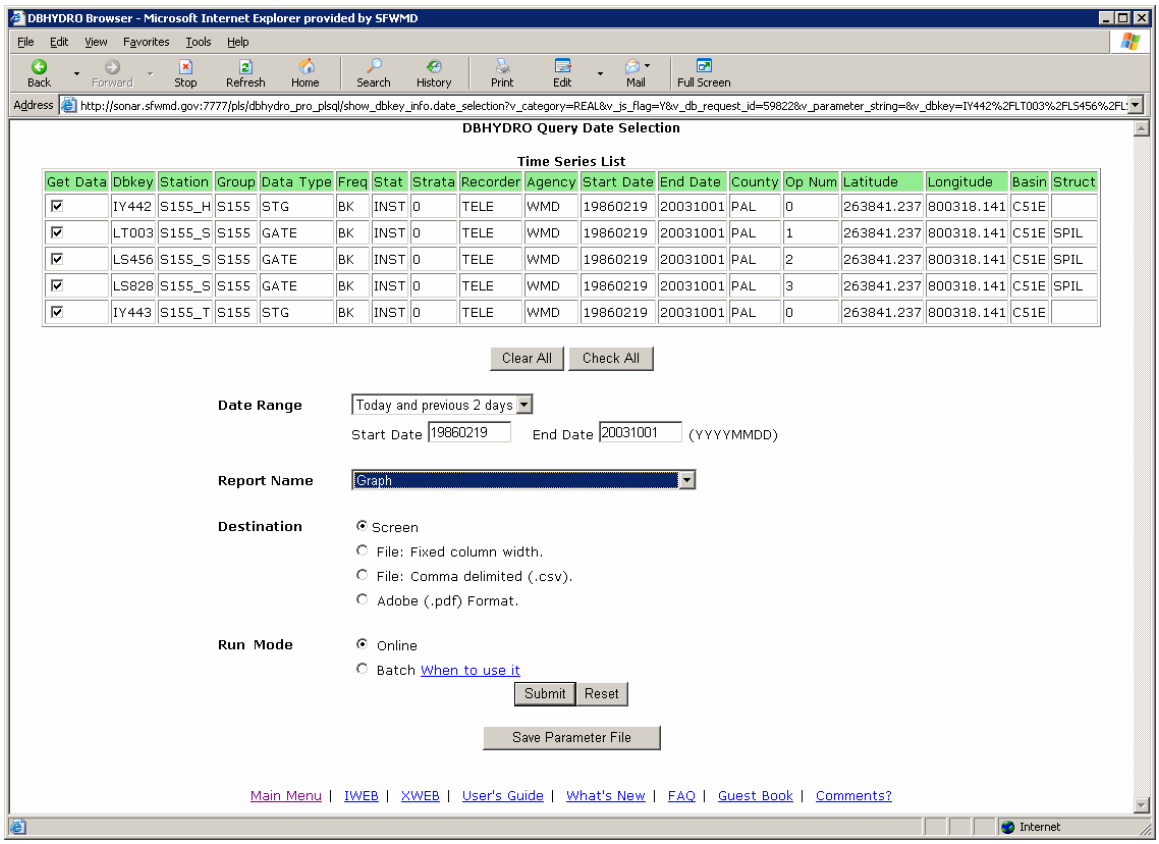
Select site S155 from the list of values and select “Submit”…



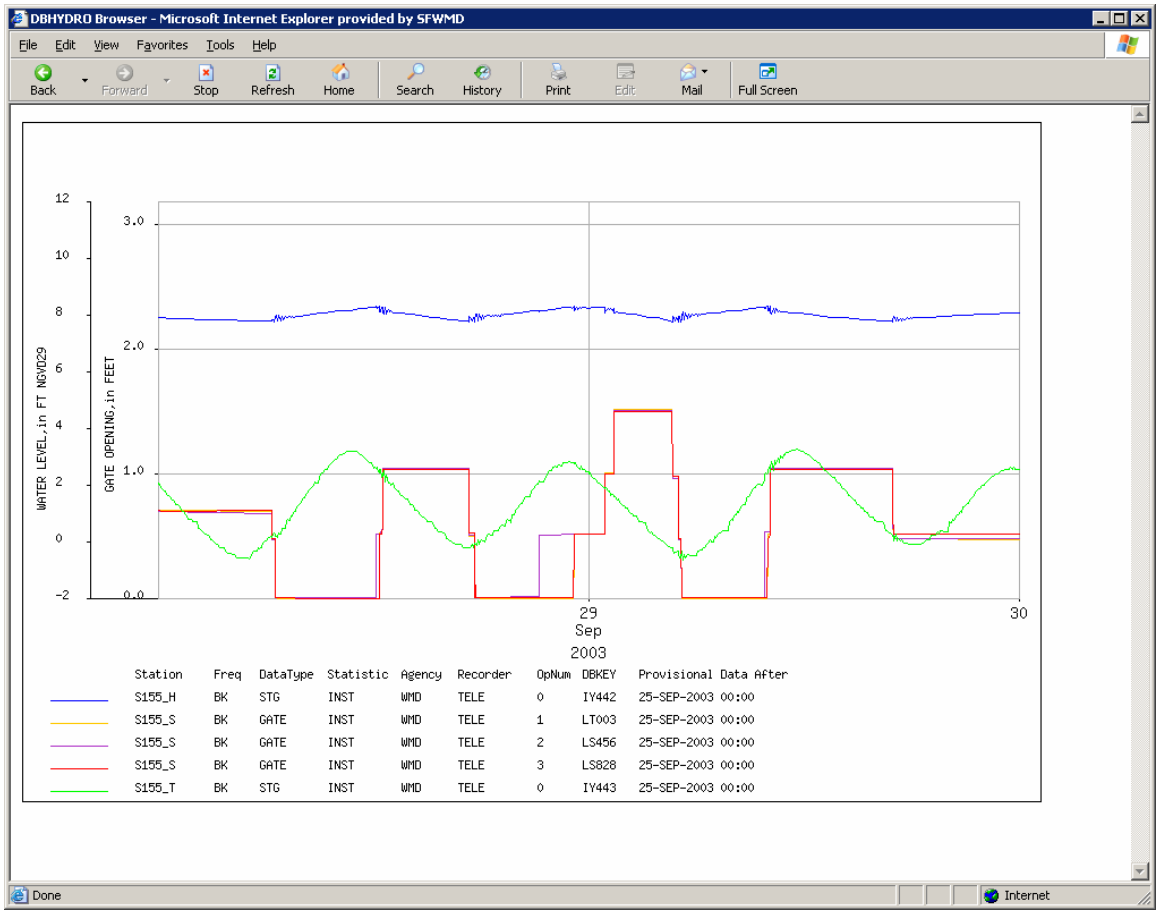
Select the time series of interest and select “Get Data”



Set the Date Range for “Today and previous 2 days”, select the Plot radio button, and press the Submit button.



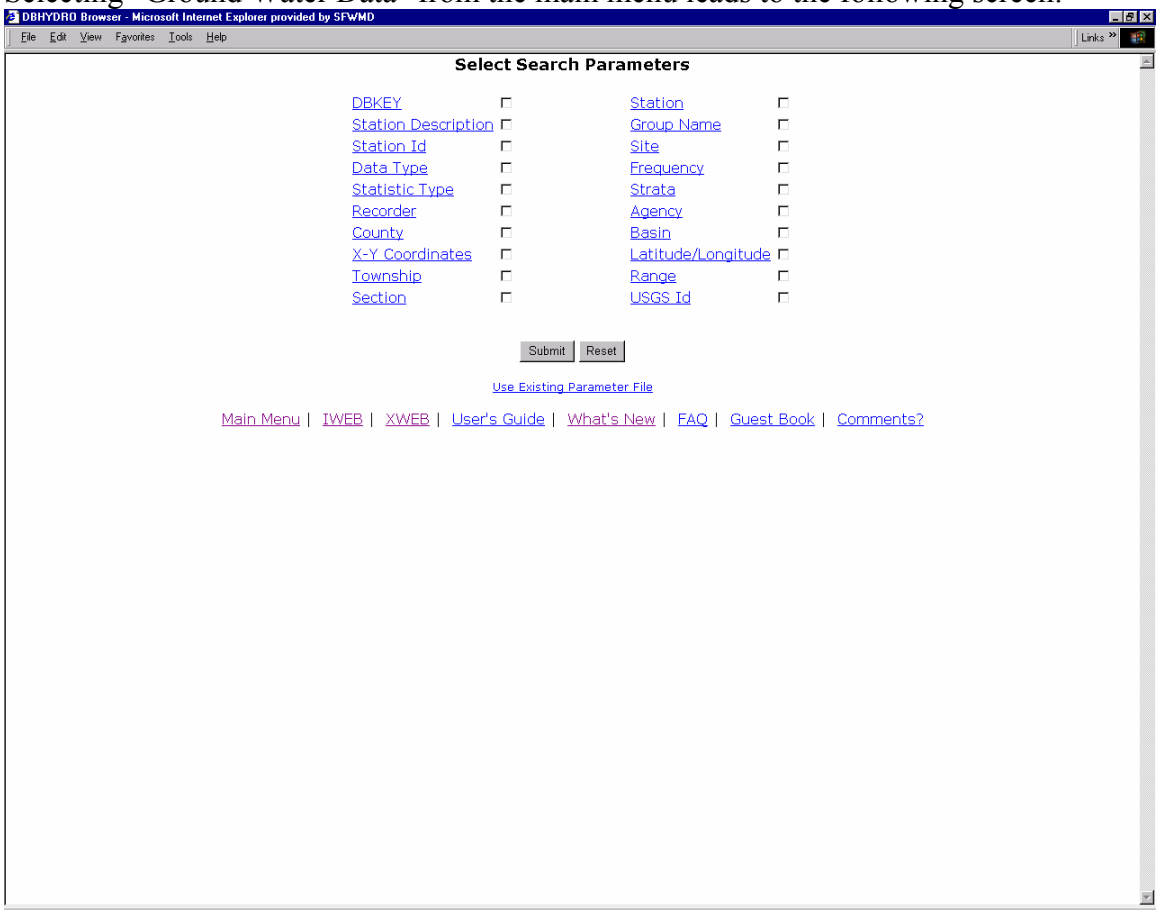
A hydrograph with current data is generated and displayed:



This graph shows stage (water levels) and gate openings for the past two days. It also tells us before which date each time series is provisional. Provisional data is that data which is considered not to have undergone standard and accepted review procedures.

Ground Water Data

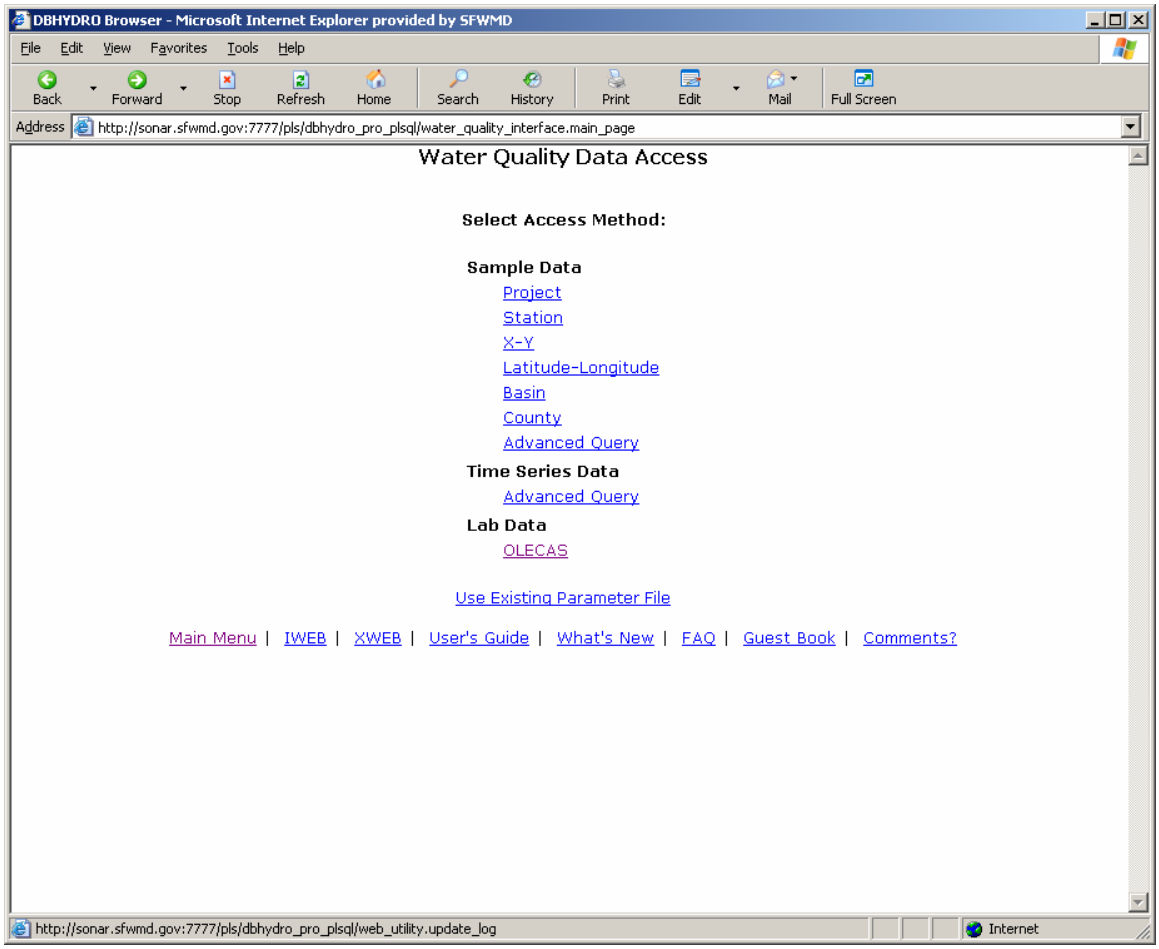
Selecting "Ground Water Data" from the main menu leads to the following screen:



You will notice there is a slight difference in the search parameters that are available for ground water data. The search parameters are different because ground water data, while related to surface water data, is a different discipline.
Soon "aquifer" will be a criterion that can be used in queries.

Water Quality Data

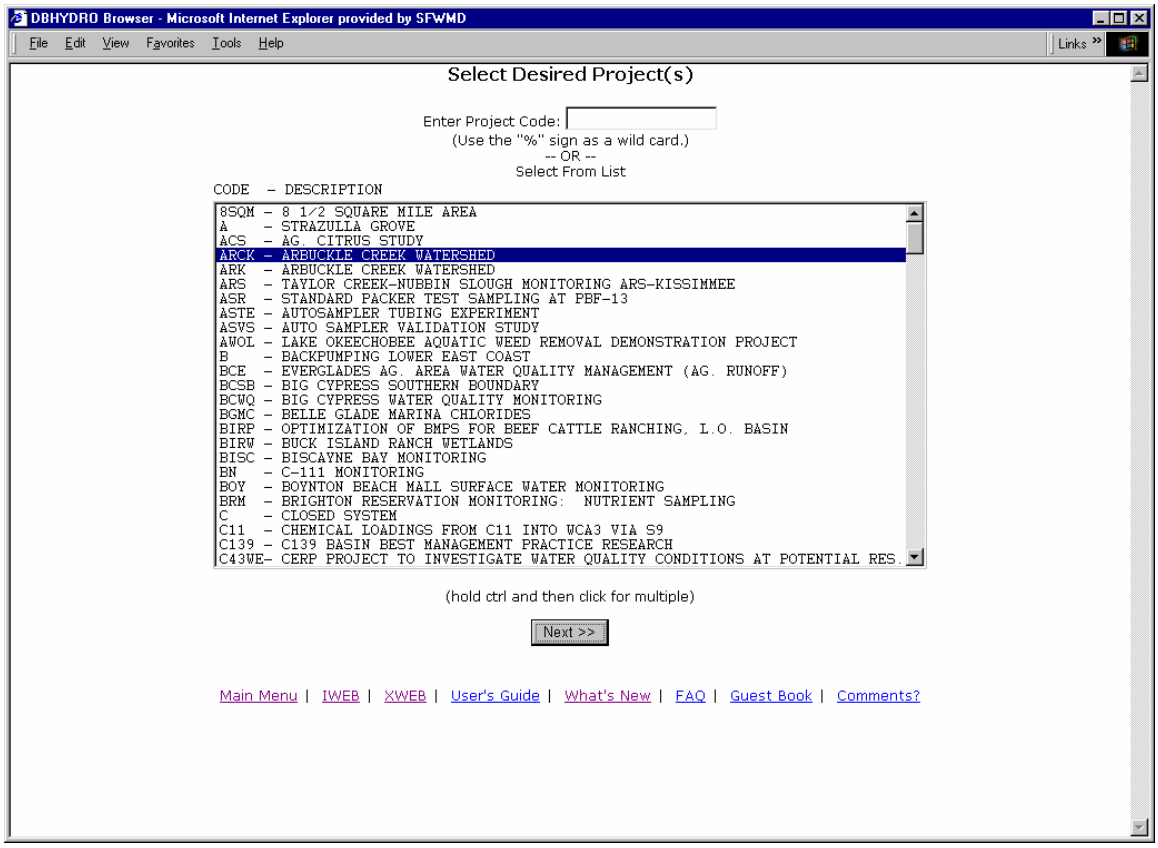
Selecting "Water Quality Data" from the main menu leads to the following screen:



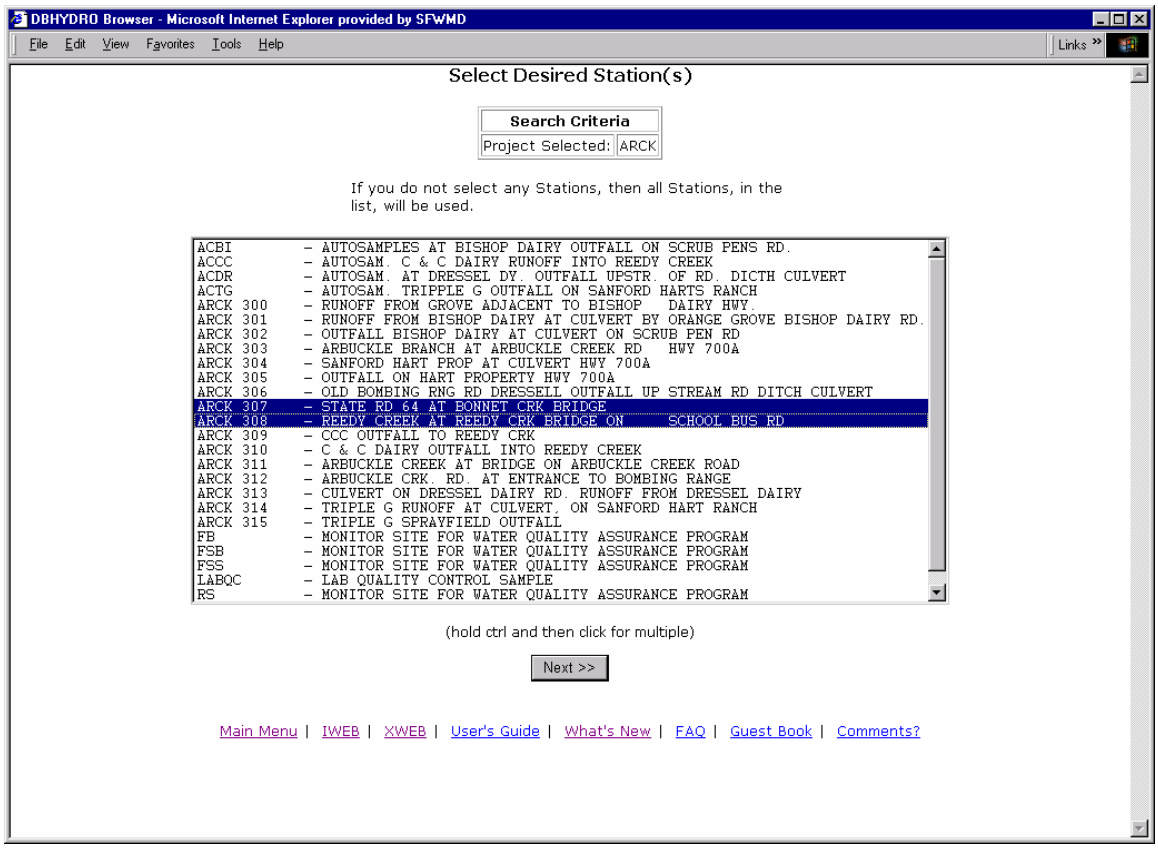
Most water quality queries have similar characteristics so the interface for water quality has been designed to facilitate the most frequently encountered queries. An Advanced Query option is available for users who require the complete range of flexibility offered by the Surface Water and Meteorological Data interface.

Additionally, for internal users, access to the SFWMD Laboratory Information Management System is offered thru a utility known as OLECAS. OLECAS stands for On Line Environmental Chemist Assistant. More information on OLECAS is at the end of this section.

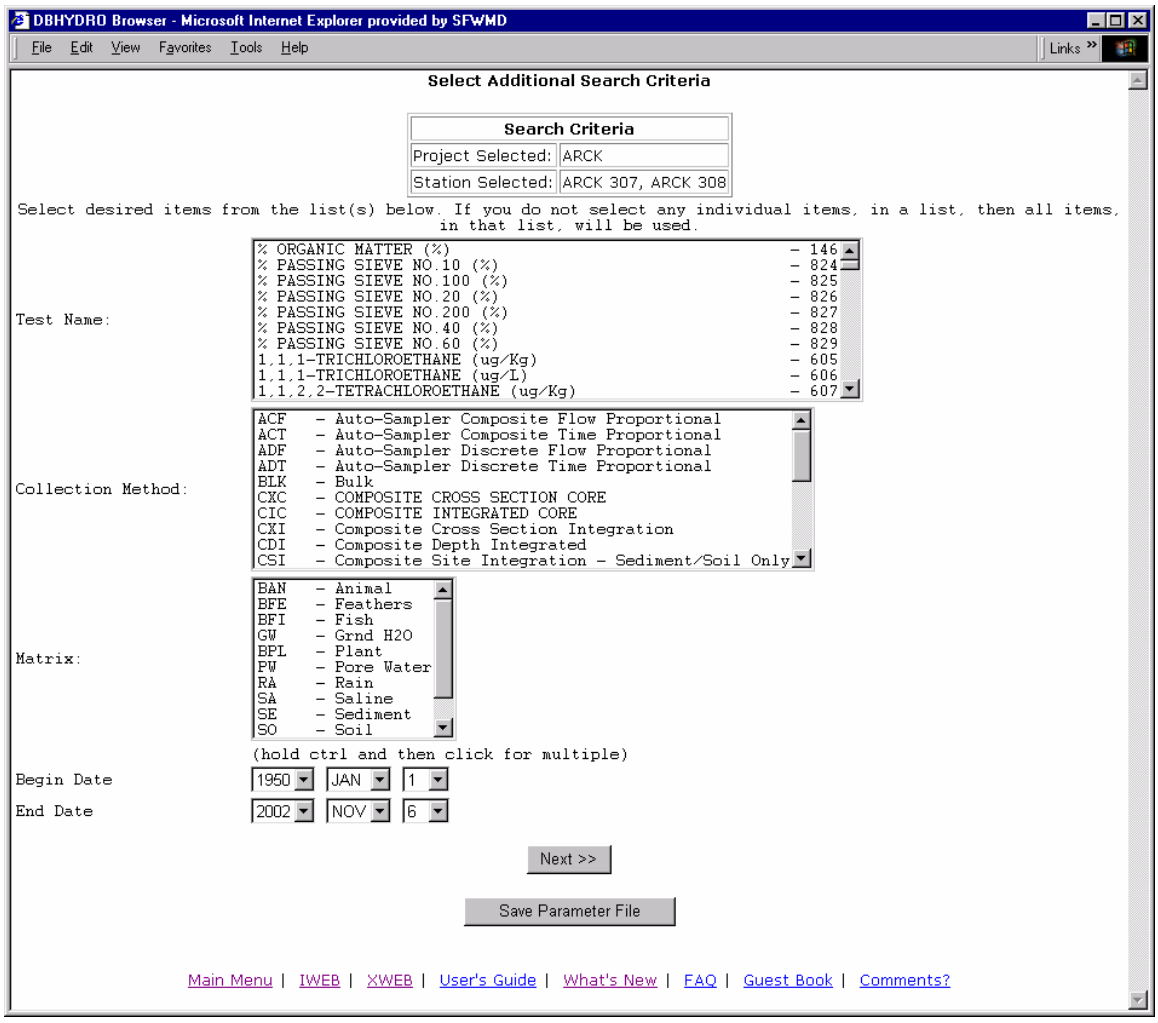
Selecting Project from the water quality menu leads to this screen in which you can type in a project code or select one or more project codes from the list of values and then select “Next >>”.



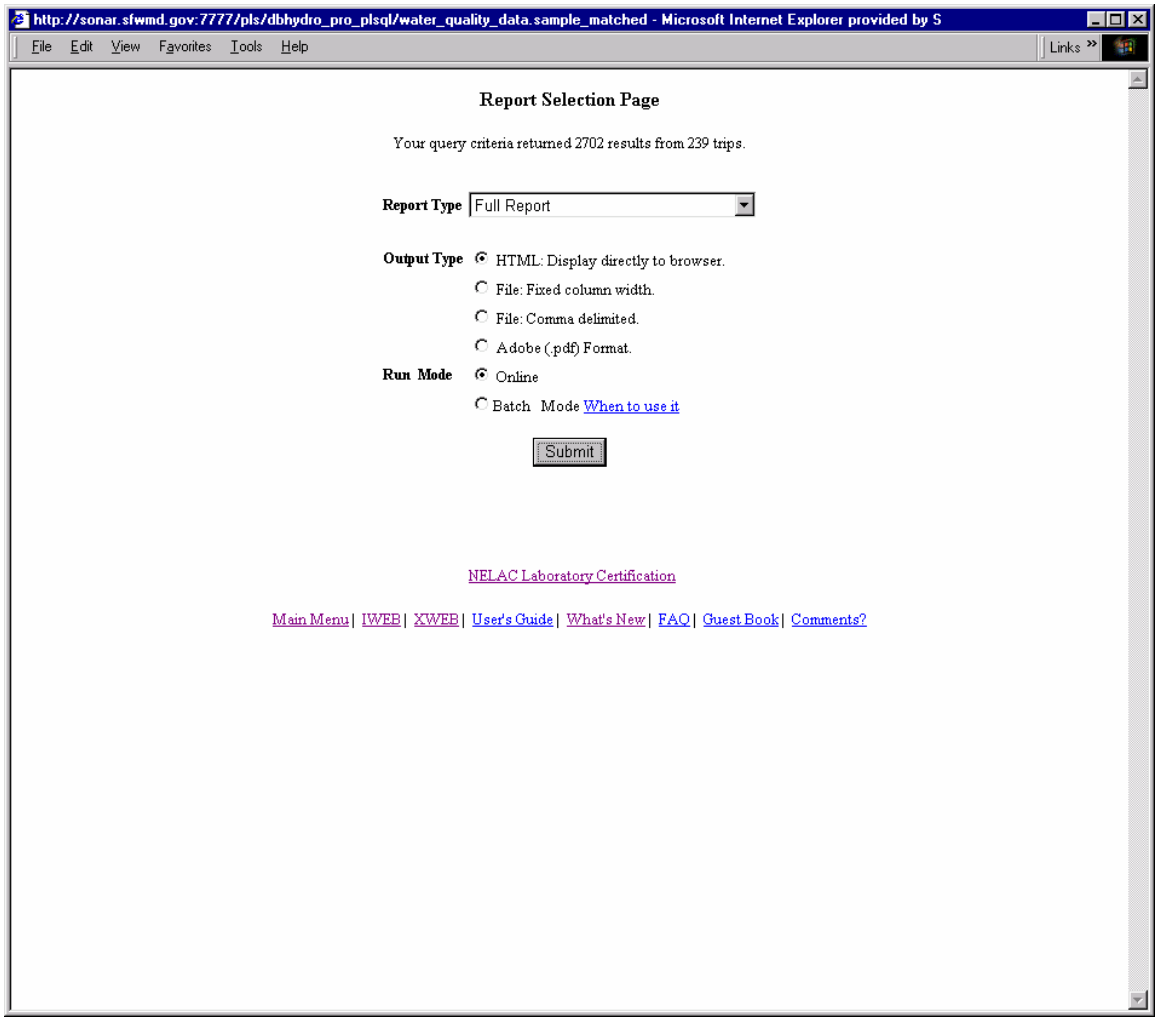
A list of all the stations for which data has been collected under the given project(s) is provided. Stations of interest may be selected. Select "Next>>".



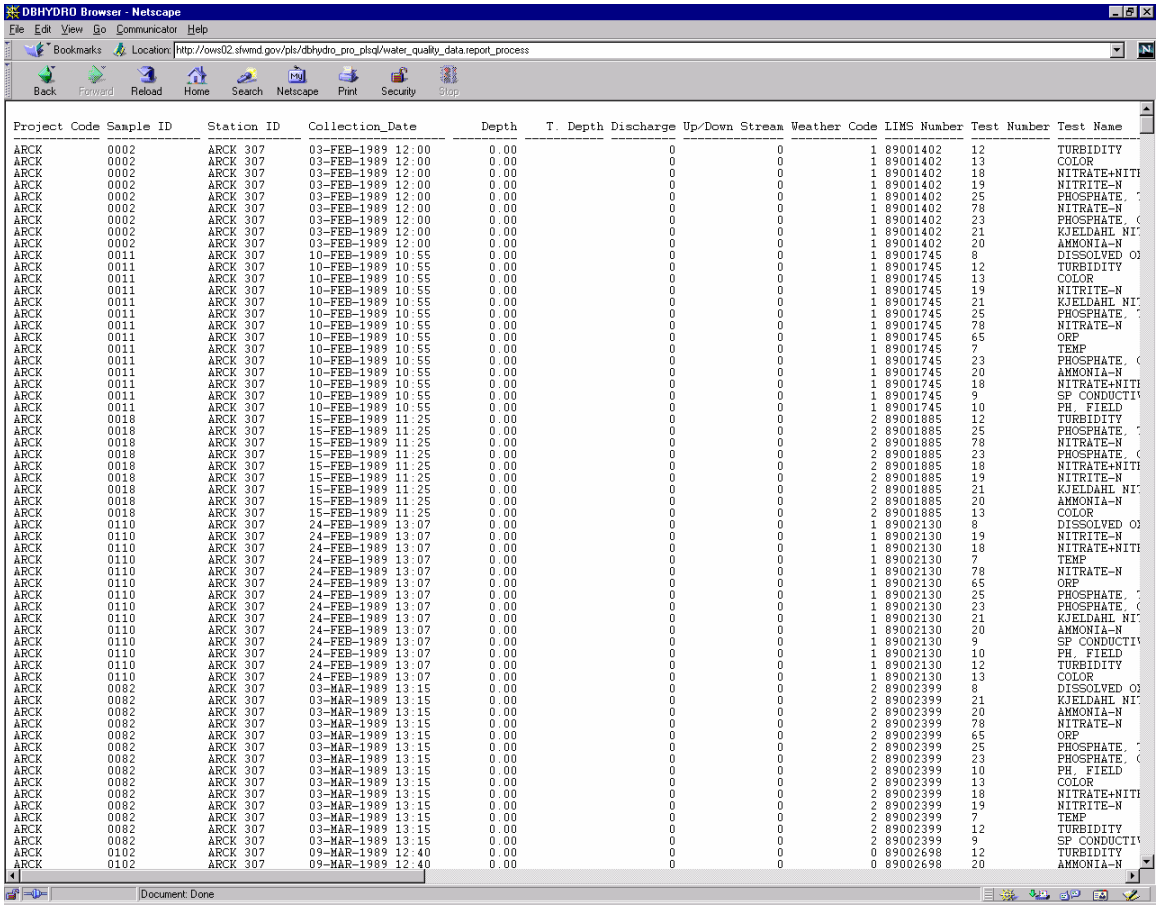
A list of test names, collection methods, and Matrices is presented. Select those upon you which to filter your results. Provide a date range for your query. Select "Next>>".



Choose Full Report frm the list of available reporting types:



and the following report is returned to your browser!!!



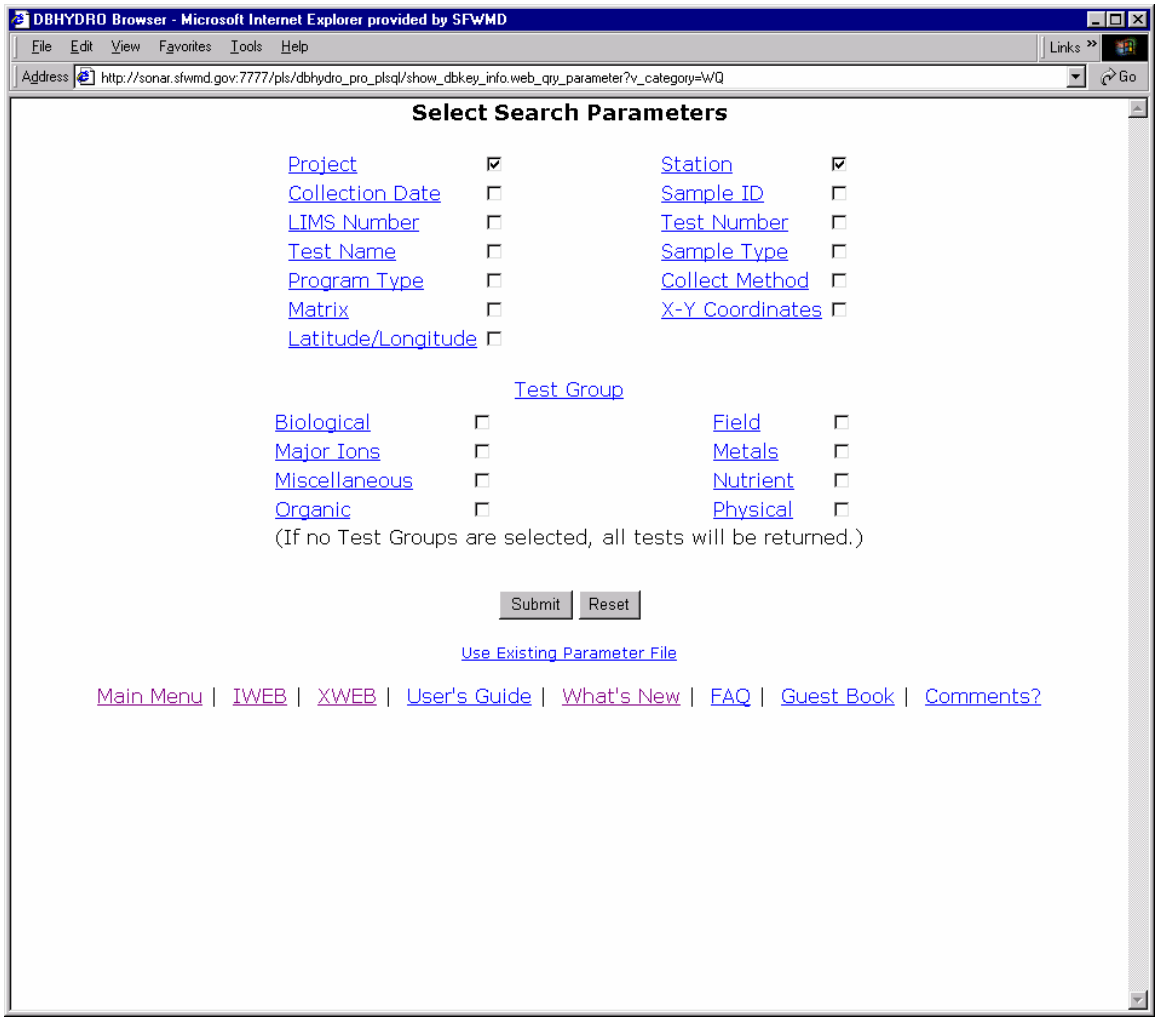
Project Code	Sample ID	Station ID	Collection_Date	Depth	T. Depth	Discharge	Up/Down Stream	Weather Code	LIMS Number	Test Number	Test Name
ARCK	0002	ARCK 307	03-FEB-1989 12:00	0.00		0	0	1	89001402	12	TURBIDITY
ARCK	0002	ARCK 307	03-FEB-1989 12:00	0.00		0	0	1	89001402	13	COLOR
ARCK	0002	ARCK 307	03-FEB-1989 12:00	0.00		0	0	1	89001402	18	NITRATE+NITI
ARCK	0002	ARCK 307	03-FEB-1989 12:00	0.00		0	0	1	89001402	19	NITRITE-N
ARCK	0002	ARCK 307	03-FEB-1989 12:00	0.00		0	0	1	89001402	25	PHOSPHATE,
ARCK	0002	ARCK 307	03-FEB-1989 12:00	0.00		0	0	1	89001402	78	NITRATE-N
ARCK	0002	ARCK 307	03-FEB-1989 12:00	0.00		0	0	1	89001402	23	PHOSPHATE,
ARCK	0002	ARCK 307	03-FEB-1989 12:00	0.00		0	0	1	89001402	21	KJELDAHL NI
ARCK	0002	ARCK 307	03-FEB-1989 12:00	0.00		0	0	1	89001402	20	AMMONIA-N
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	8	DISSOLVED O
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	12	TURBIDITY
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	13	COLOR
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	19	NITRITE-N
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	21	KJELDAHL NI
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	25	PHOSPHATE,
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	78	NITRATE-N
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	65	ORP
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	7	TEMP
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	23	PHOSPHATE,
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	20	AMMONIA-N
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	18	NITRATE+NITI
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	9	SP CONDUCTI
ARCK	0011	ARCK 307	10-FEB-1989 10:55	0.00		0	0	1	89001745	10	PH, FIELD
ARCK	0018	ARCK 307	15-FEB-1989 11:25	0.00		0	0	2	89001885	12	TURBIDITY
ARCK	0018	ARCK 307	15-FEB-1989 11:25	0.00		0	0	2	89001885	25	PHOSPHATE,
ARCK	0018	ARCK 307	15-FEB-1989 11:25	0.00		0	0	2	89001885	78	NITRATE-N
ARCK	0018	ARCK 307	15-FEB-1989 11:25	0.00		0	0	2	89001885	23	PHOSPHATE,
ARCK	0018	ARCK 307	15-FEB-1989 11:25	0.00		0	0	2	89001885	18	NITRATE+NITI
ARCK	0018	ARCK 307	15-FEB-1989 11:25	0.00		0	0	2	89001885	19	NITRITE-N
ARCK	0018	ARCK 307	15-FEB-1989 11:25	0.00		0	0	2	89001885	21	KJELDAHL NI
ARCK	0018	ARCK 307	15-FEB-1989 11:25	0.00		0	0	2	89001885	20	AMMONIA-N
ARCK	0018	ARCK 307	15-FEB-1989 11:25	0.00		0	0	2	89001885	13	COLOR
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	8	DISSOLVED O
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	19	NITRITE-N
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	18	NITRATE+NITI
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	7	TEMP
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	78	NITRATE-N
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	65	ORP
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	25	PHOSPHATE,
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	23	PHOSPHATE,
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	21	KJELDAHL NI
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	20	AMMONIA-N
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	9	SP CONDUCTI
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	10	PH, FIELD
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	12	TURBIDITY
ARCK	0110	ARCK 307	24-FEB-1989 13:07	0.00		0	0	1	89002130	13	COLOR
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	8	DISSOLVED O
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	21	KJELDAHL NI
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	20	AMMONIA-N
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	78	NITRATE-N
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	65	ORP
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	25	PHOSPHATE,
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	23	PHOSPHATE,
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	10	PH, FIELD
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	13	COLOR
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	18	NITRATE+NITI
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	19	NITRITE-N
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	7	TEMP
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	12	TURBIDITY
ARCK	0082	ARCK 307	03-MAR-1989 13:15	0.00		0	0	2	89002399	9	SP CONDUCTI
ARCK	0102	ARCK 307	09-MAR-1989 12:40	0.00		0	0	0	89002698	12	TURBIDITY
ARCK	0102	ARCK 307	09-MAR-1989 12:40	0.00		0	0	0	89002698	20	AMMONIA-N

The output has many columns as indicated by the presence of scroll bar at the bottom of the screen.

Other basic water quality searches work in a similar manner.

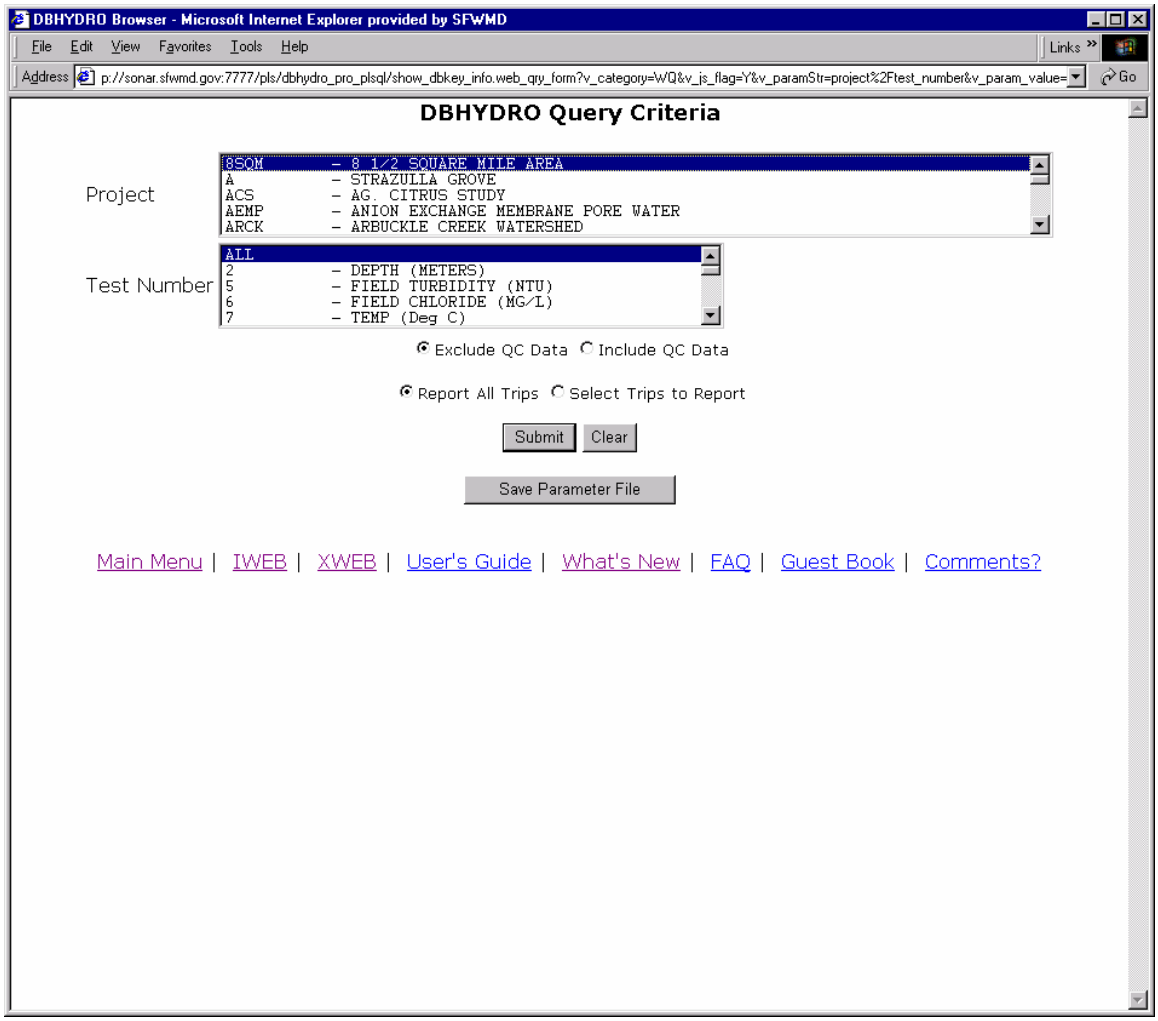
You can return to the water quality menu and perform an "Sample - Advanced Query" if the other "Sample" searches do not suit your needs.

Selecting Advanced Query leads you to this screen which allows for a complete range of query input parameters. Typical queries involve the selection of a project, a possibly a station, and one or more test names…



Program type, matrix, and collection method are unique to water quality data. Data can also be retrieved by the various common test groups. Test groups are a convenient way to specify a family of tests without having to note each test individually.

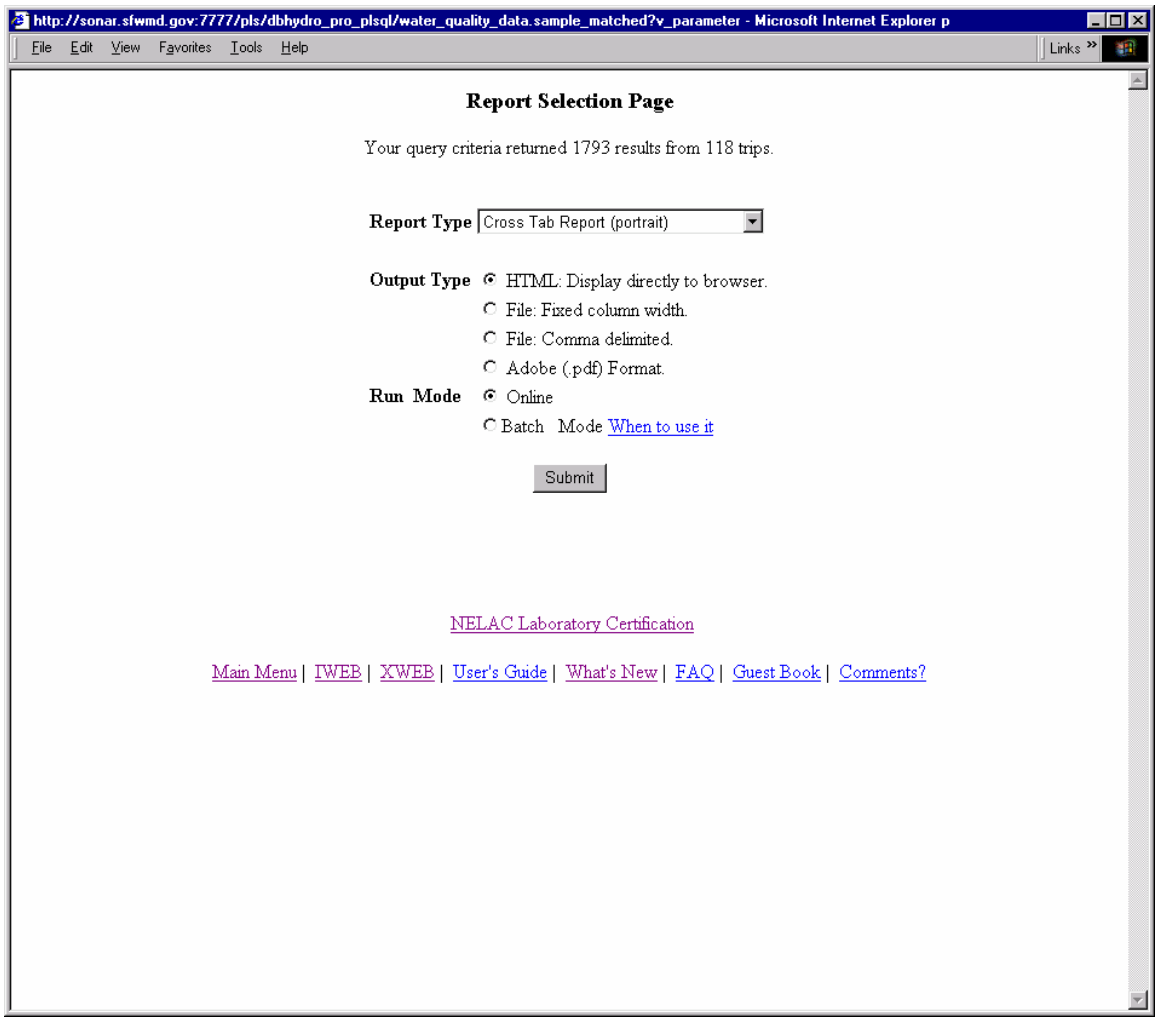
You may now select from the lists of values…



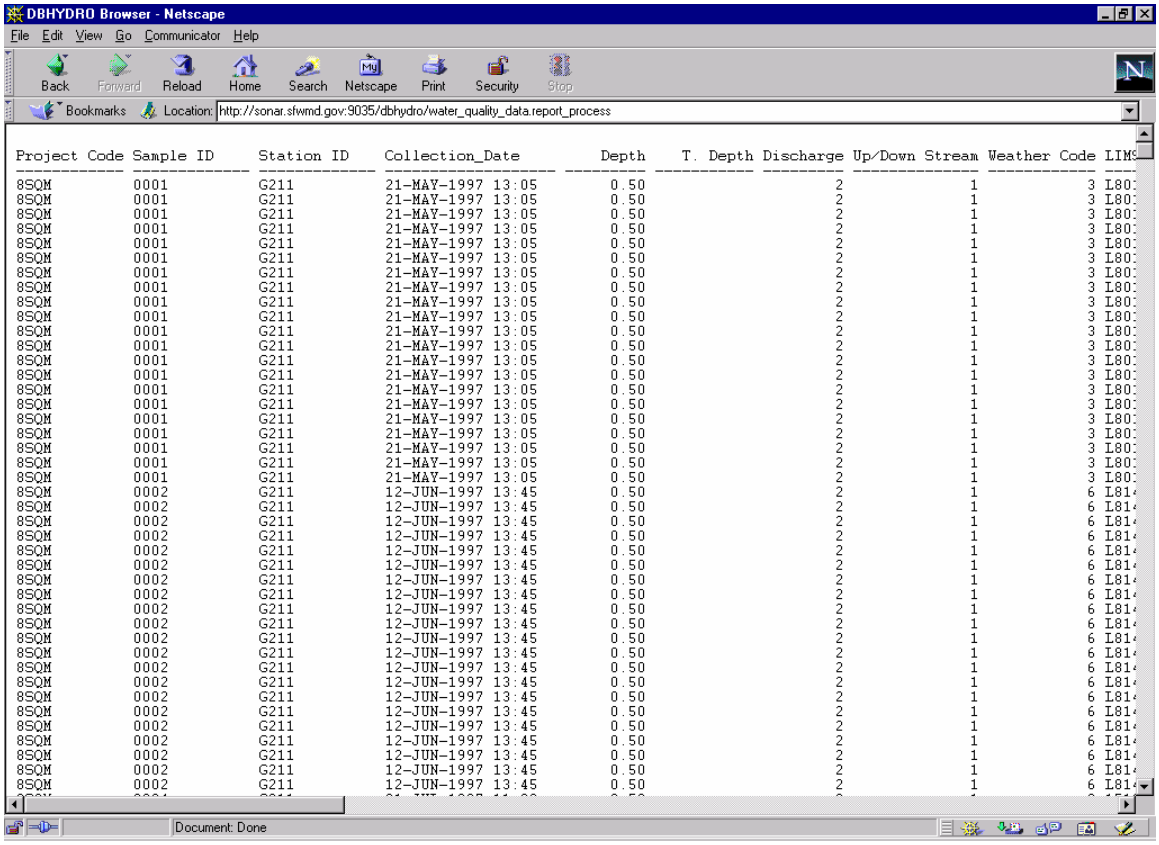
In this example the user has selected the 8SQM project and let the test name criteria default to 'ALL'. The user could also simply have not bothered to check the test name check box in the first place in order to achieve the effect of selecting all test names. The user may select to report on all trips or filter out trips based on a subsequently prescribed date range. In this example, data from all trips are being sought as there is no desire to filter out specific trips prior to data retrieval.

The default excludes the Quality Control (QC) results. However, if one wishes to retrieve QC results such as "spikes" and "blanks" one may choose the "Include QC Data" radio button.

After selecting the submit button, summary information about the complete report is presented followed by a report layout options selector and output format list…



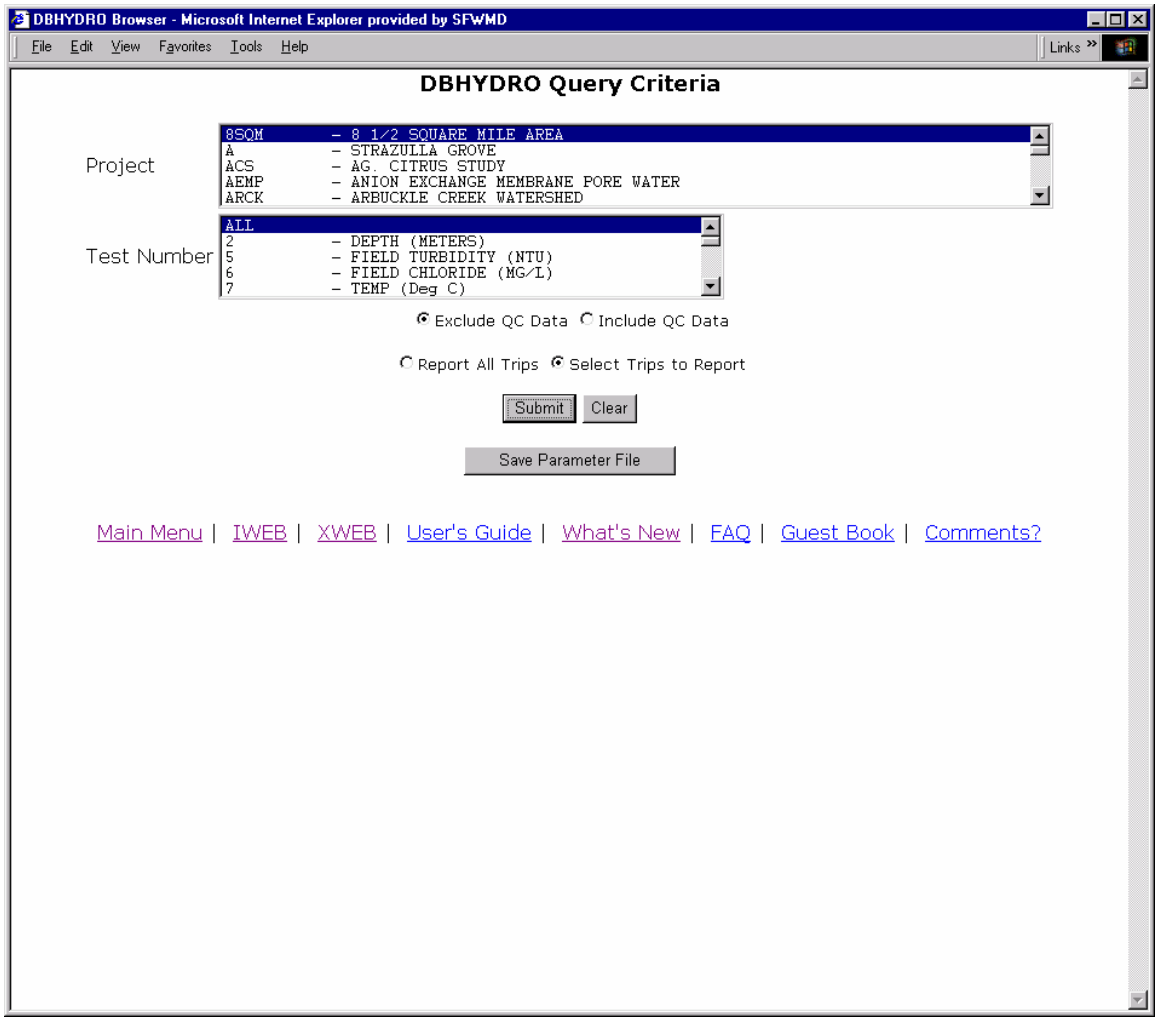
An example listing of the "Full Report" output to the screen follows:



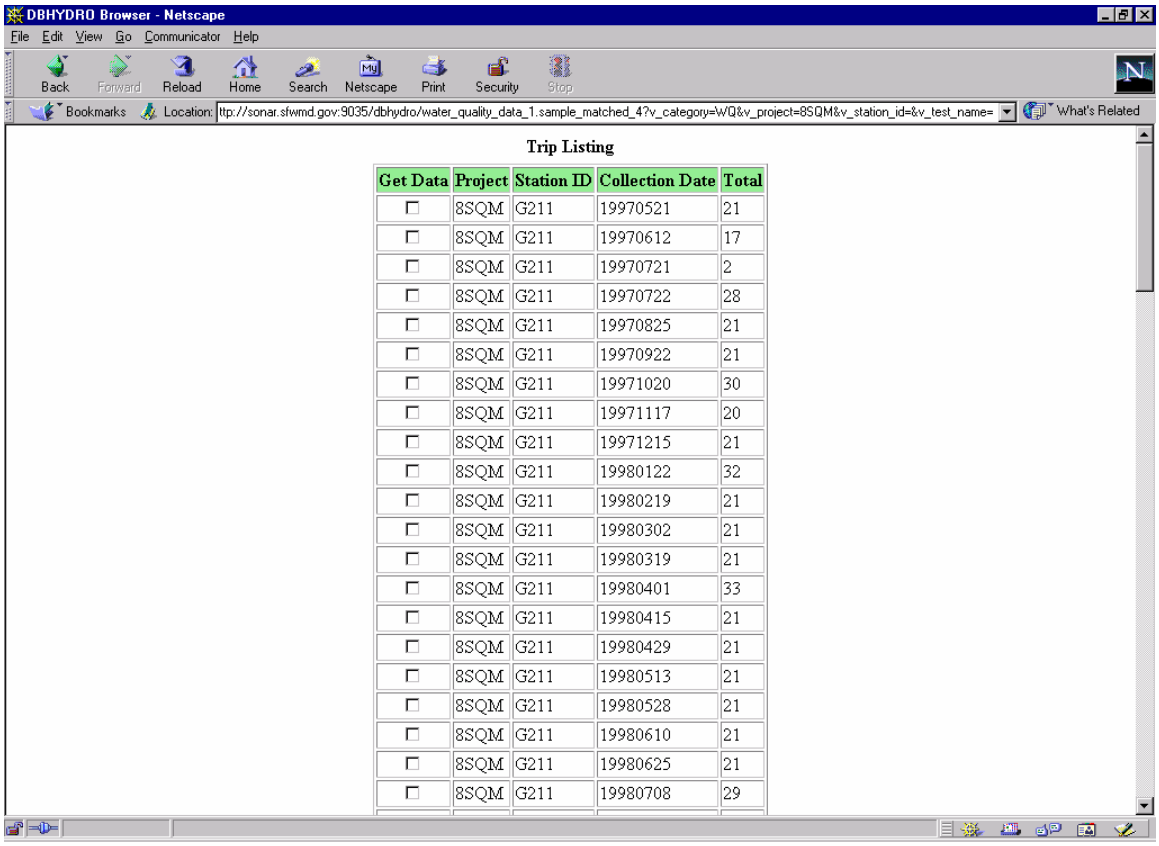
Project Code	Sample ID	Station ID	Collection_Date	Depth	T. Depth	Discharge	Up/Down Stream	Weather Code	LIMS
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0001	G211	21-MAY-1997 13:05	0.50		2	1	3	L80
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81
8SQM	0002	G211	12-JUN-1997 13:45	0.50		2	1	6	L81

The Full Report option is a "dump" directly from the database of each row and column for the results satisfying the query criteria.
By choosing the other radio buttons different output options can be used. As you can see the Rull Report is very wide. Selecting a file for output, rather than the screen, is very helpful in managing these long lines of data. The fixed format file and comma delimited file options are helpful for import into a spreadsheet application. The .pdf file output is great for sharing on the web or in email.

An alternate approach to a complete listing would be to select results by trip…



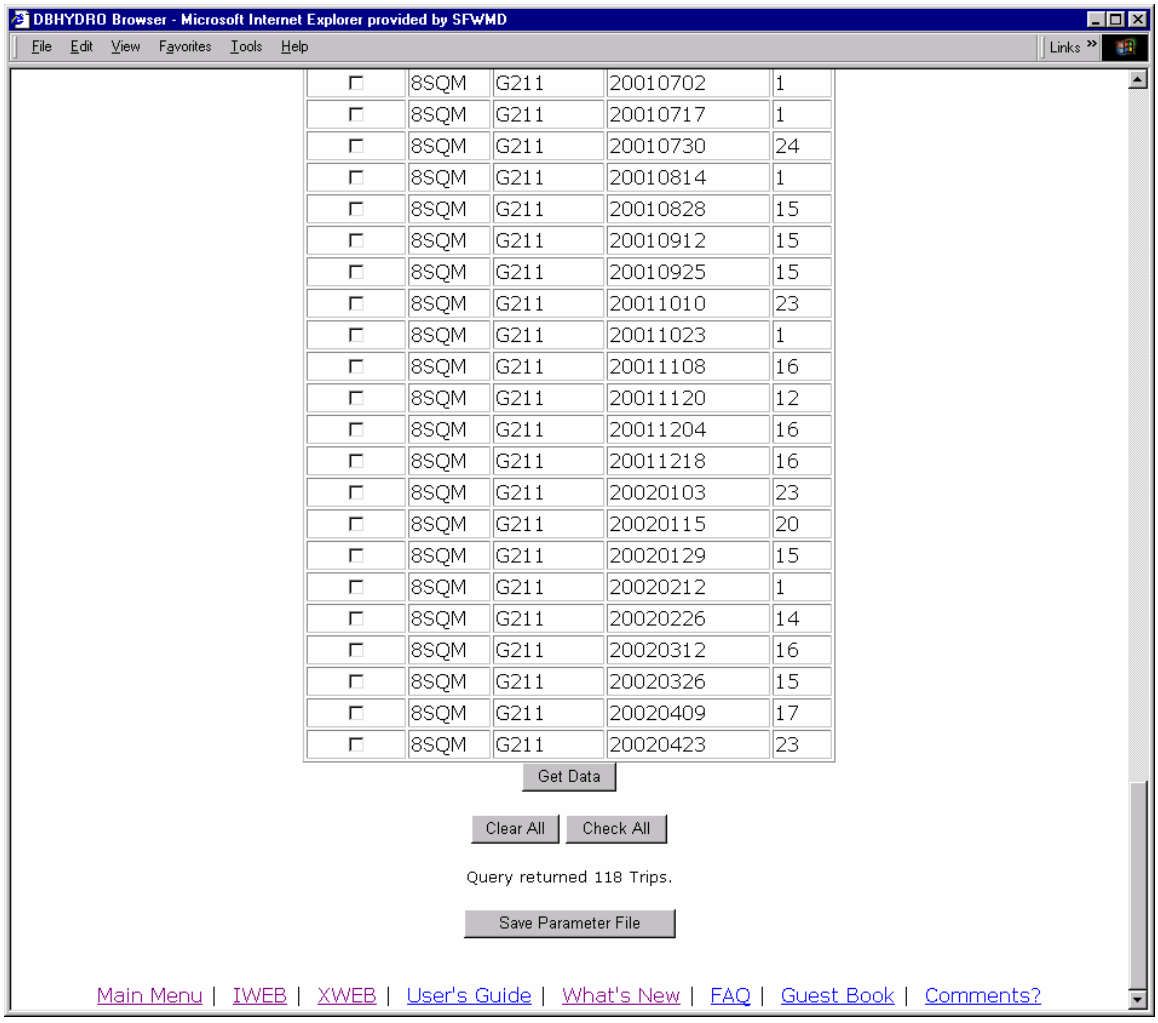
A list of relevant trips meeting the specified criteria is displayed along with the number of results derived from each trip…



Trip Listing

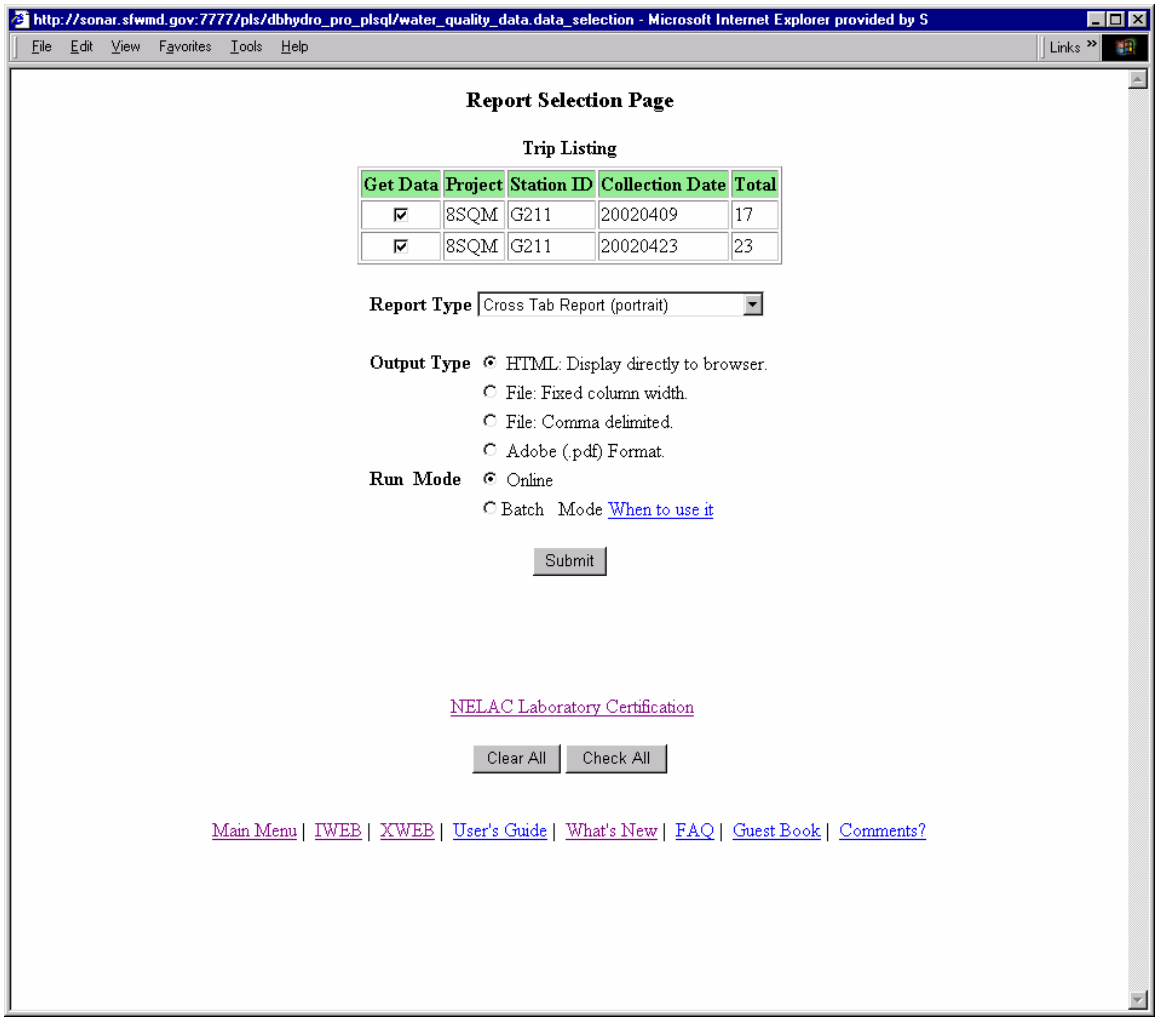
Get Data	Project	Station ID	Collection Date	Total
☐	8SQM	G211	19970521	21
☐	8SQM	G211	19970612	17
☐	8SQM	G211	19970721	2
☐	8SQM	G211	19970722	28
☐	8SQM	G211	19970825	21
☐	8SQM	G211	19970922	21
☐	8SQM	G211	19971020	30
☐	8SQM	G211	19971117	20
☐	8SQM	G211	19971215	21
☐	8SQM	G211	19980122	32
☐	8SQM	G211	19980219	21
☐	8SQM	G211	19980302	21
☐	8SQM	G211	19980319	21
☐	8SQM	G211	19980401	33
☐	8SQM	G211	19980415	21
☐	8SQM	G211	19980429	21
☐	8SQM	G211	19980513	21
☐	8SQM	G211	19980528	21
☐	8SQM	G211	19980610	21
☐	8SQM	G211	19980625	21
☐	8SQM	G211	19980708	29

After selecting the trips of interest….



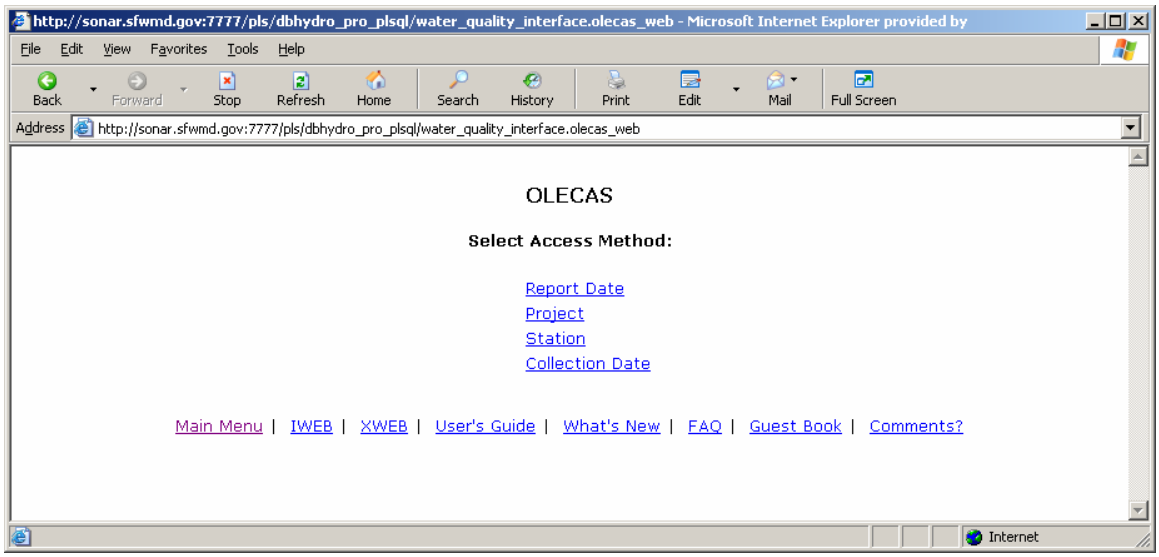
the user selects the Get Data button.

Getting data results in the following listing which is a consolidation of the selected trips:



The report type and output options are the same as for reporting on all trips.

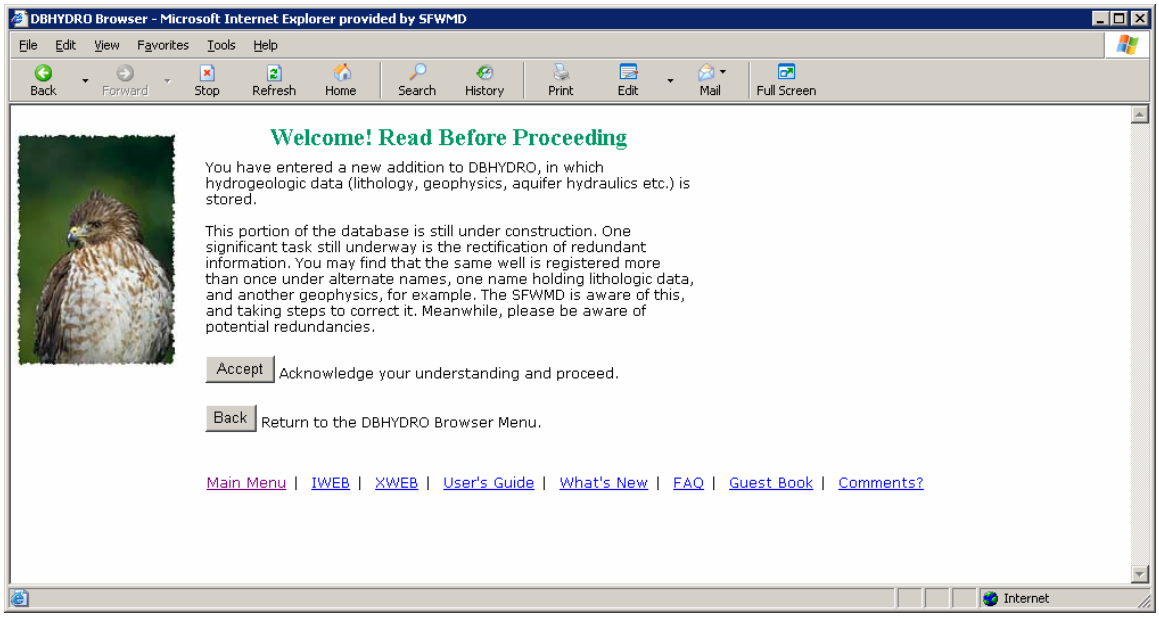
Returning to the Water Quality menu and selectiong OLECAS brings us to the following screen:



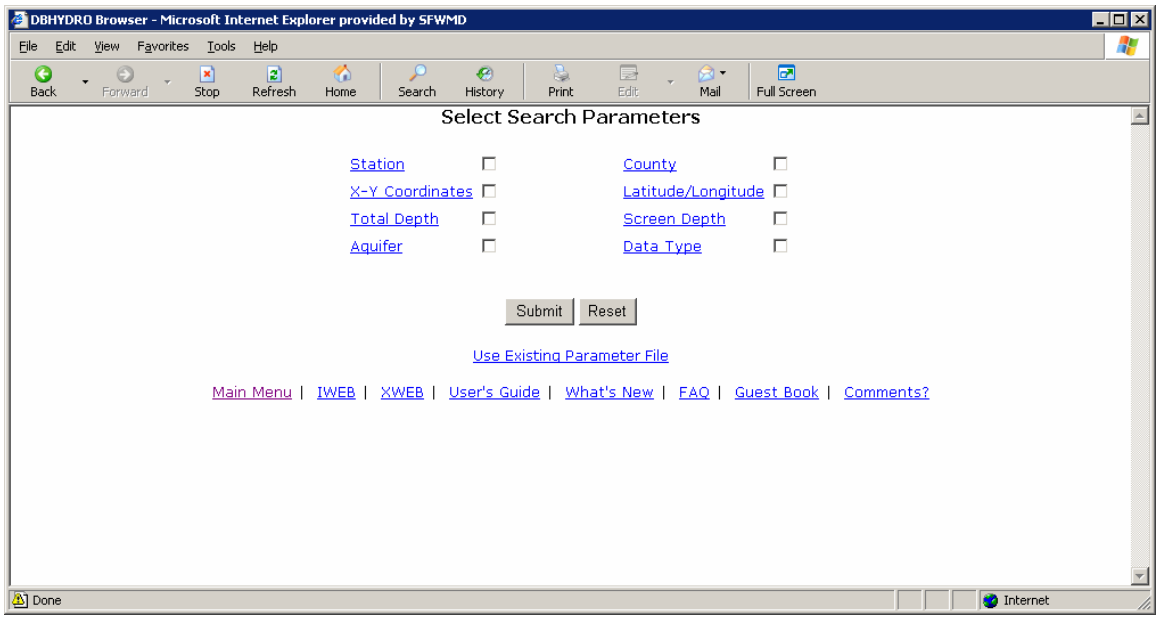
From here, the internal users may examine the laboratory data for potential outliers according to the statistical distribution of the data.

Hydrogeologic Data

Selecting *Hydrogeologic Data* from the main menu takes you to the following page:

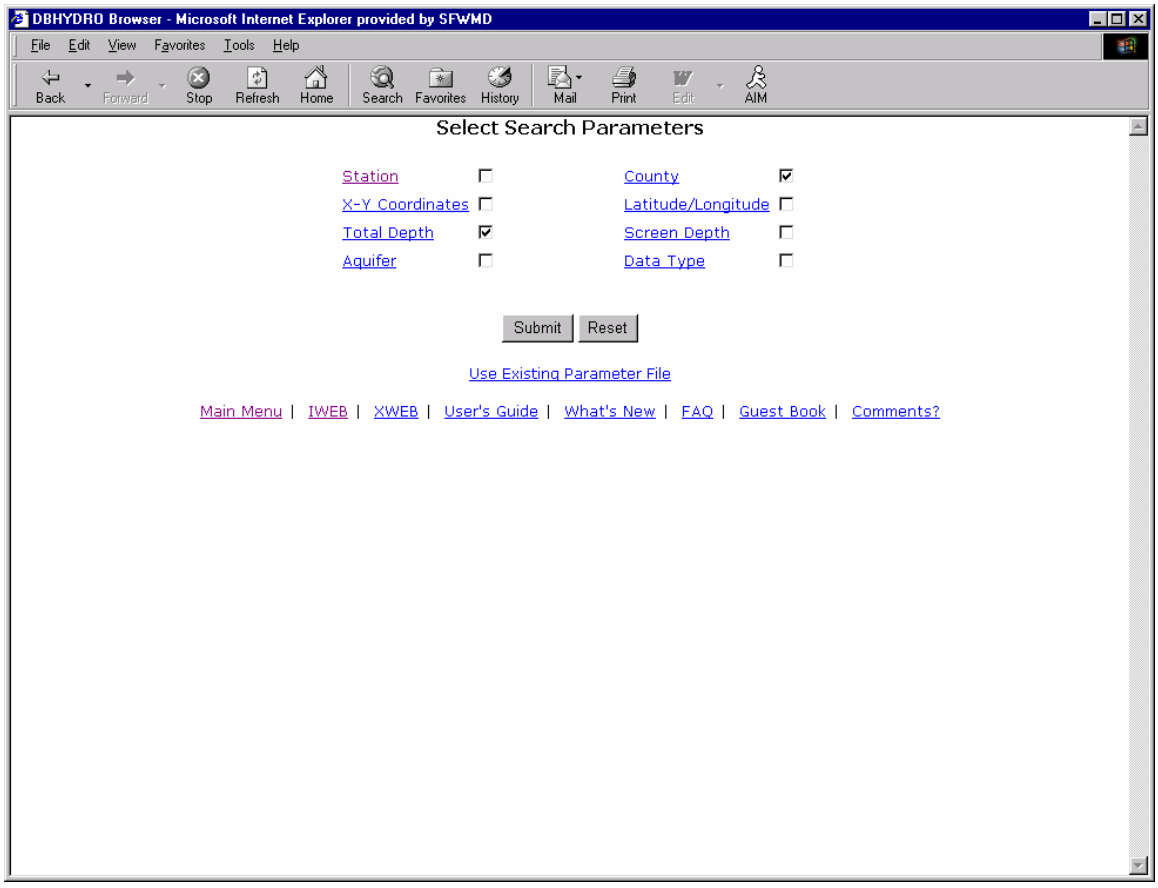


Accepting the disclaimer leads the user to the next page:



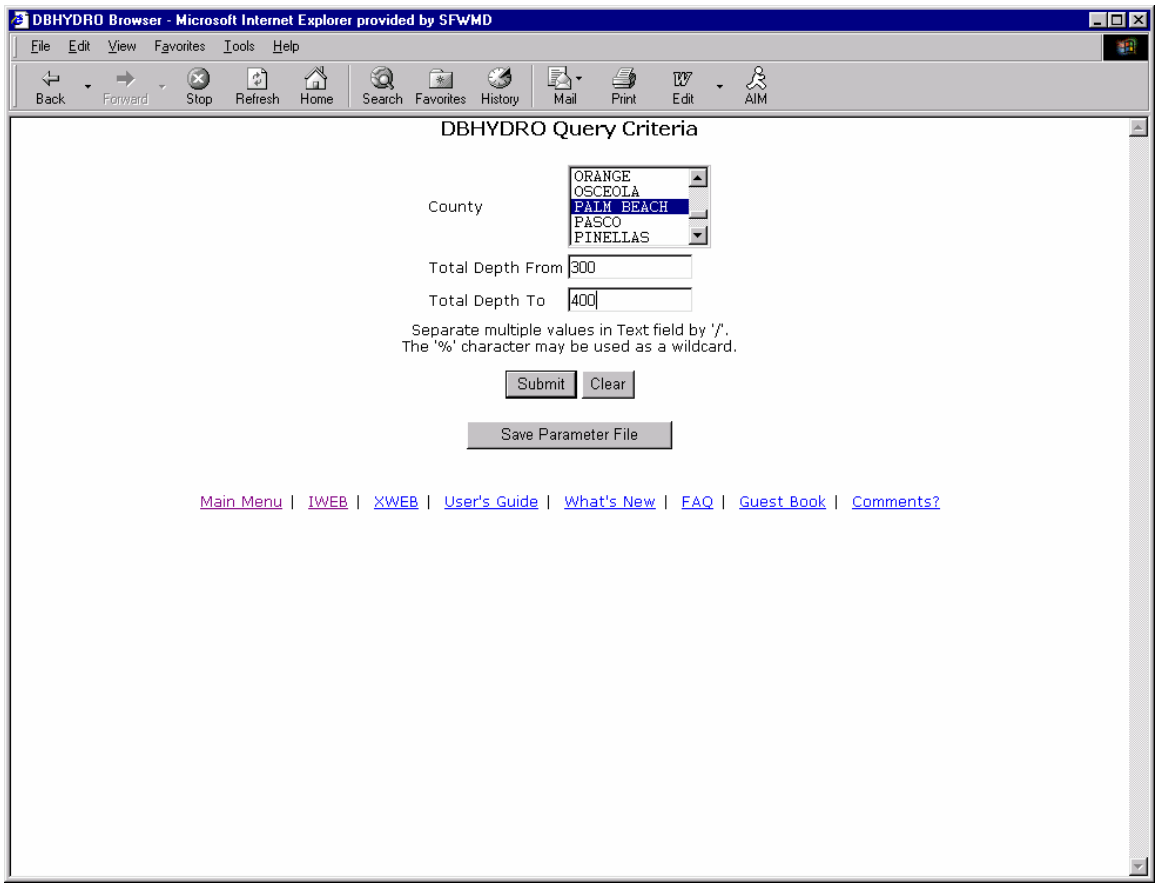
While the search parameters look similar to those in *Ground Water Data*, queries under *Hydrogeologic Data* direct you to well construction specifications, geophysical, hydraulic and lithologic data, and multimedia data rather than to time series data. Once you have chosen your selection criteria, the browser directs you to a page that displays that criteria and allows you to submit or save your parameters to a file.

In the example below, a query was built to select all wells in Palm Beach County with total depths between 300 and 400 feet.
You would select County and Total Depth as shown below…



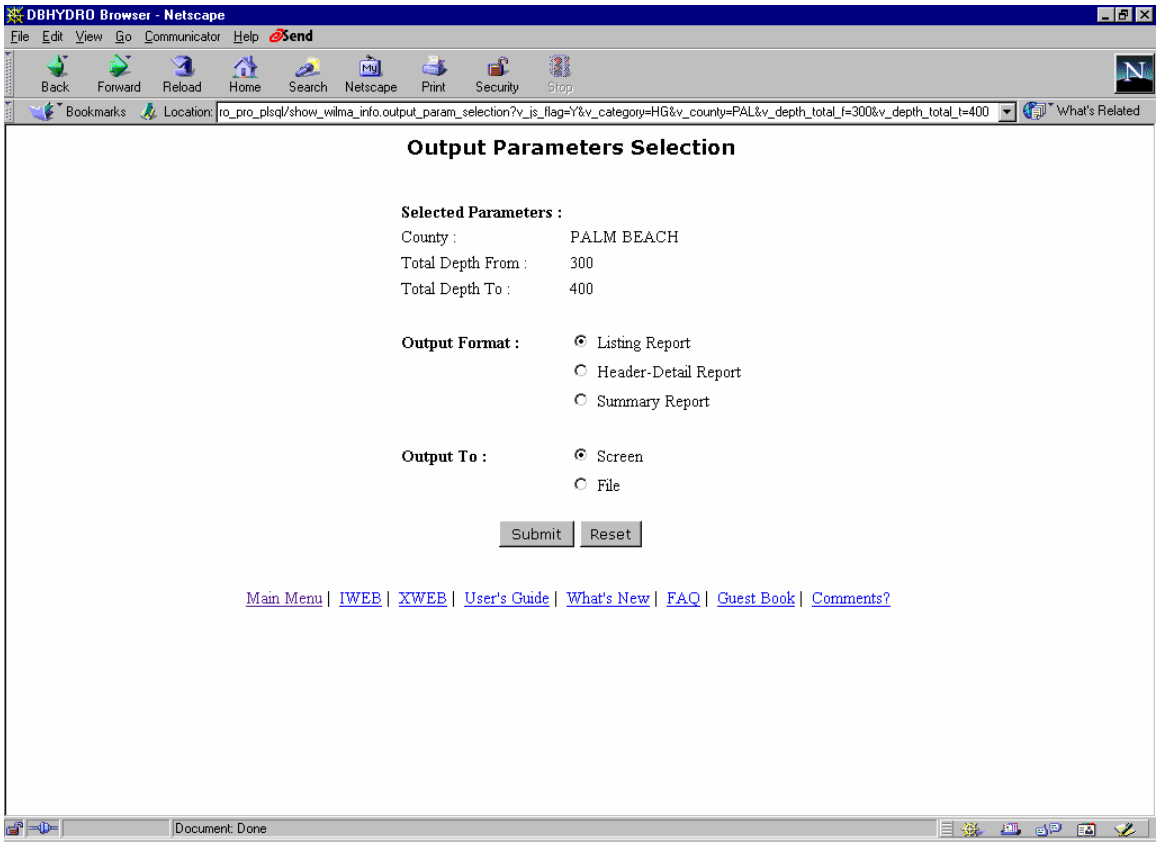
and then click on “Submit”.

The following screen will appear. This screen allows you to select the specific county or counties and specify the range of total depth...



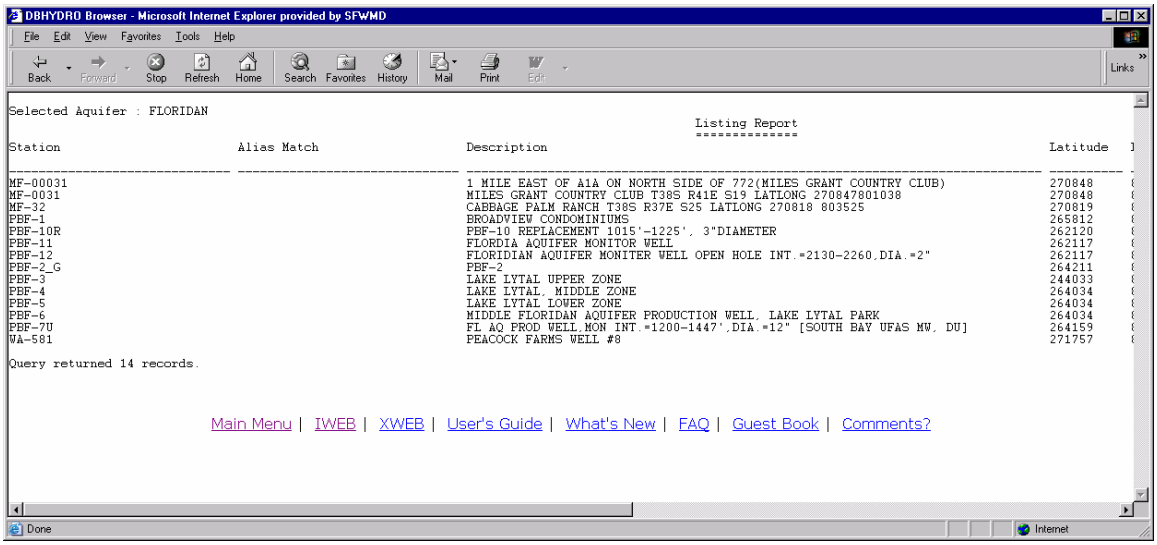
Clicking on “submit” leads you to the Output Parameters Selection screen…

This screen allows you to select what kind of report you want and where you want the output to go…

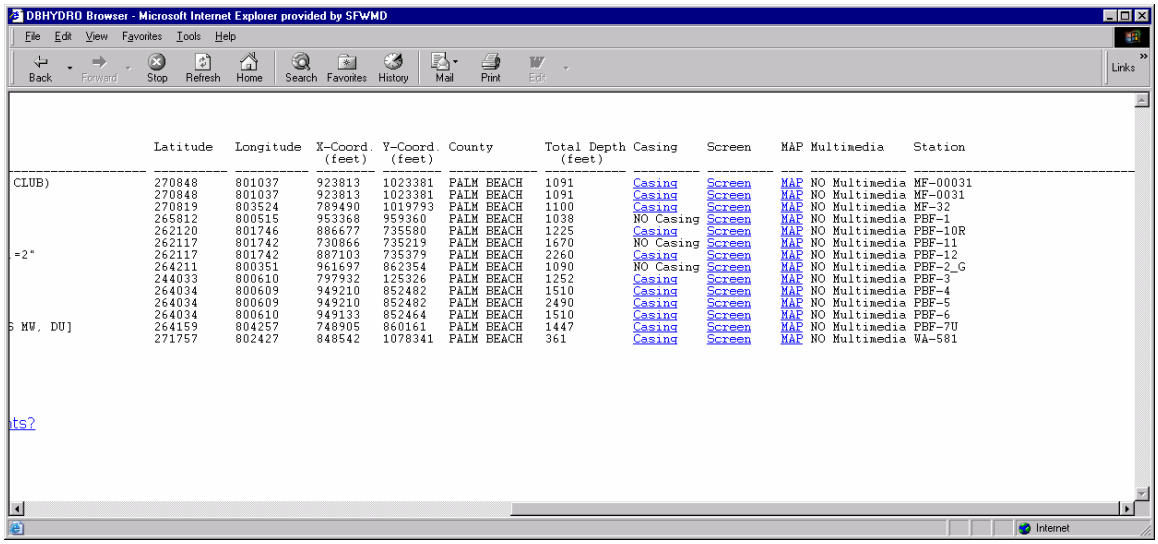


In this example, a Listing Report is chosen.

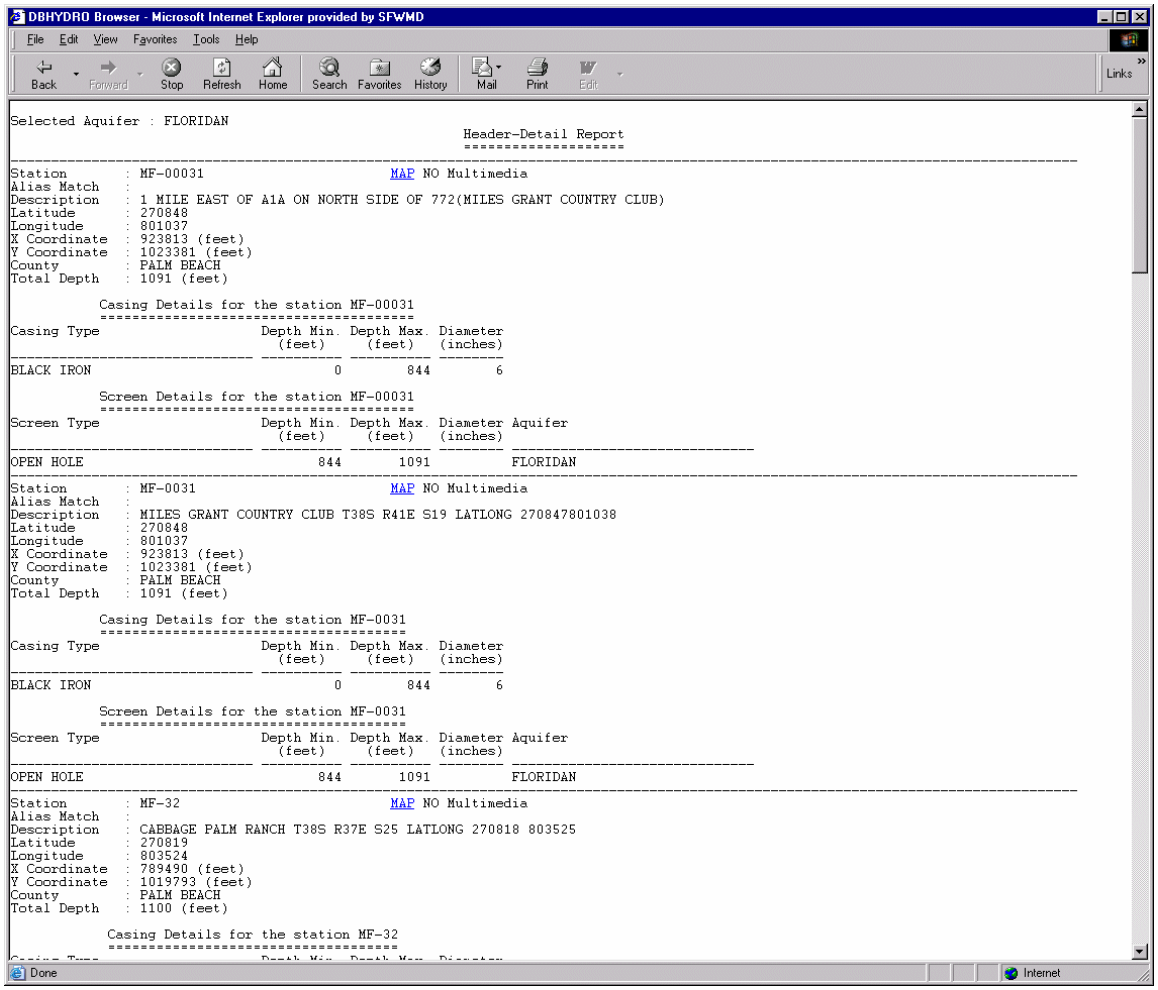
The Listing Report Option (shown below) returns a table with names, locations, and highlighted items for construction and multimedia data when available.



The Listing Report is wide and you will have to scroll to the right to see that there are links to casing, screen, and multimedia information. There is also a link to a map.



A Header-Detail report lists the information for all wells that met your search criteria and the report looks like this…



DBHYDRO Browser - Microsoft Internet Explorer provided by SFWMD

Selected Aquifer : FLORIDAN

Header-Detail Report

Station : MF-00031 MAP NO Multimedia
Alias Match :
Description : 1 MILE EAST OF A1A ON NORTH SIDE OF 772(MILES GRANT COUNTRY CLUB)
Latitude : 270848
Longitude : 801037
X Coordinate : 923813 (feet)
Y Coordinate : 1023381 (feet)
County : PALM BEACH
Total Depth : 1091 (feet)

Casing Details for the station MF-00031

Casing Type	Depth Min. (feet)	Depth Max. (feet)	Diameter (inches)
BLACK IRON	0	844	6

Screen Details for the station MF-00031

Screen Type	Depth Min. (feet)	Depth Max. (feet)	Diameter (inches)	Aquifer
OPEN HOLE	844	1091		FLORIDAN

Station : MF-0031 MAP NO Multimedia
Alias Match :
Description : MILES GRANT COUNTRY CLUB T38S R41E S19 LATLONG 270847801038
Latitude : 270848
Longitude : 801037
X Coordinate : 923813 (feet)
Y Coordinate : 1023381 (feet)
County : PALM BEACH
Total Depth : 1091 (feet)

Casing Details for the station MF-0031

Casing Type	Depth Min. (feet)	Depth Max. (feet)	Diameter (inches)
BLACK IRON	0	844	6

Screen Details for the station MF-0031

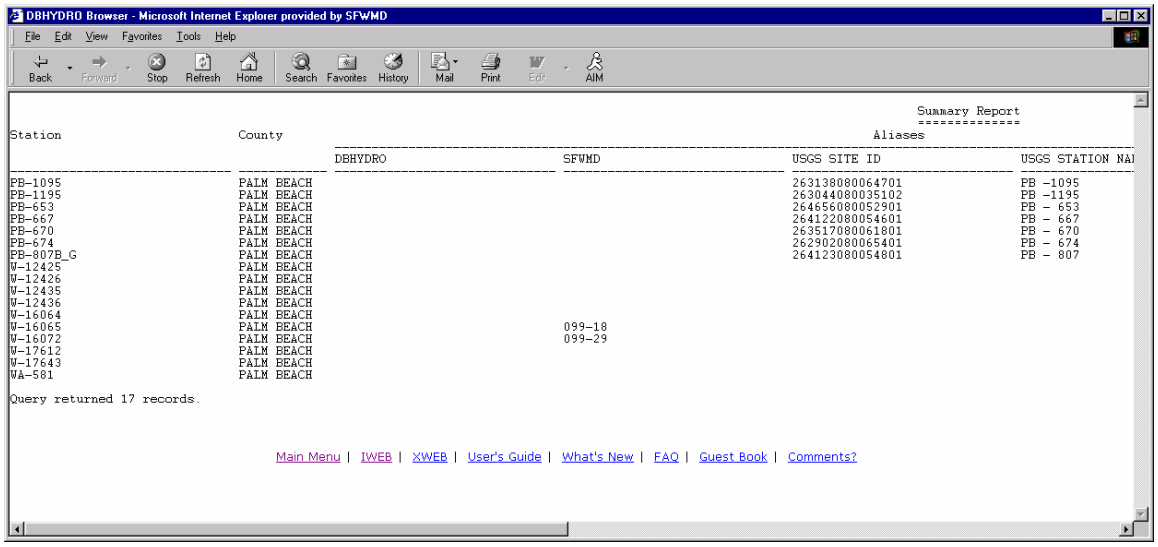
Screen Type	Depth Min. (feet)	Depth Max. (feet)	Diameter (inches)	Aquifer
OPEN HOLE	844	1091		FLORIDAN

Station : MF-32 MAP NO Multimedia
Alias Match :
Description : CABBAGE PALM RANCH T38S R37E S25 LATLONG 270818 803525
Latitude : 270819
Longitude : 803524
X Coordinate : 789490 (feet)
Y Coordinate : 1019793 (feet)
County : PALM BEACH
Total Depth : 1100 (feet)

Casing Details for the station MF-32

The Header Detail option (above) offers a different display format, and shows casing and screen details on screen when they are available instead of just showing links. Both the Header Detail and the Listing Report options have links to multimedia data. These multimedia data include photos and documents in a wide variety of formats, including JPG, TXT, TIFF, XLS, PDF, and others.

The summary report (below) shows all the different types of data available for each well appearing in the query.



DBHYDRO Browser - Microsoft Internet Explorer provided by SFWMD

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Summary Report

Station	County	Aliases			
		DBHYDRO	SFWMD	USGS SITE ID	USGS STATION NAI
PB-1095	PALM BEACH			263138080064701	PB -1095
PB-1195	PALM BEACH			263044080035102	PB -1195
PB-653	PALM BEACH			264656080052901	PB - 653
PB-667	PALM BEACH			264122080054601	PB - 667
PB-670	PALM BEACH			263517080061801	PB - 670
PB-674	PALM BEACH			262902080065401	PB - 674
PB-807B_G	PALM BEACH			264123080054801	PB - 807
W-12425	PALM BEACH				
W-12426	PALM BEACH				
W-12435	PALM BEACH				
W-12436	PALM BEACH				
W-16064	PALM BEACH				
W-16065	PALM BEACH		099-18		
W-16072	PALM BEACH		099-29		
W-17612	PALM BEACH				
W-17643	PALM BEACH				
WA-581	PALM BEACH				

Query returned 17 records.

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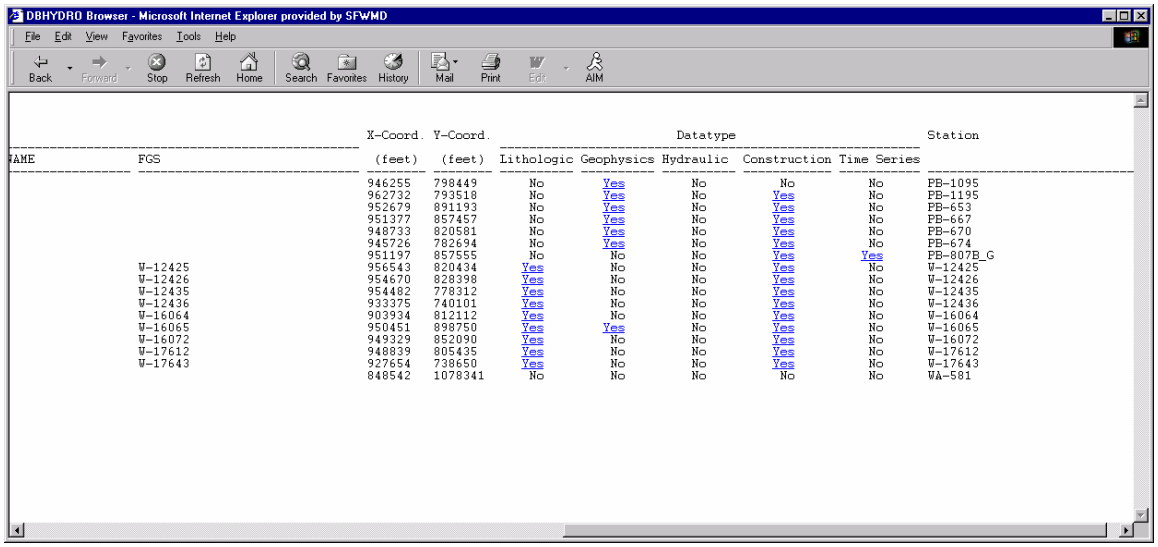

DBHYDRO Browser - Microsoft Internet Explorer provided by SFWMD

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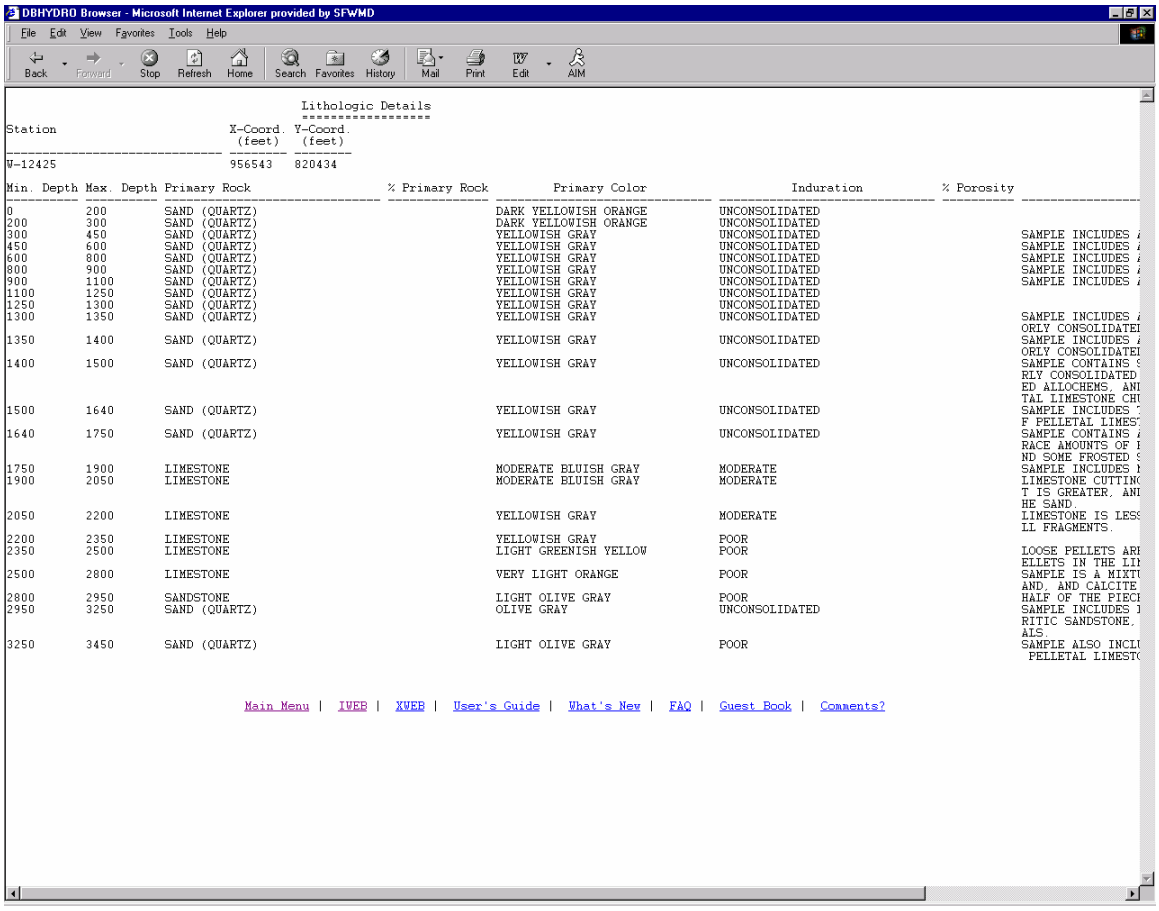
AME	FGS	X-Coord. (feet)	Y-Coord. (feet)	Datatype					Station
				Lithologic	Geophysics	Hydraulic	Construction	Time Series	
		946255	798449	No	Yes	No	No	No	PB-1095
		962732	793518	No	Yes	No	Yes	No	PB-1195
		952679	891193	No	Yes	No	Yes	No	PB-653
		951377	857457	No	Yes	No	Yes	No	PB-667
		948733	820581	No	Yes	No	Yes	No	PB-670
		945726	782694	No	Yes	No	Yes	No	PB-674
		951197	857555	No	No	No	Yes	Yes	PB-807B_G
	W-12425	956543	820434	Yes	No	No	Yes	No	W-12425
	W-12426	954670	828398	Yes	No	No	Yes	No	W-12426
	W-12435	954482	778312	Yes	No	No	Yes	No	W-12435
	W-12436	933375	740101	Yes	No	No	Yes	No	W-12436
	W-16064	903934	812112	Yes	No	No	Yes	No	W-16064
	W-16065	950451	898750	Yes	Yes	No	Yes	No	W-16065
	W-16072	949329	852090	Yes	No	No	Yes	No	W-16072
	W-17612	948839	805435	Yes	No	No	Yes	No	W-17612
	W-17643	927654	738650	Yes	No	No	Yes	No	W-17643
		848542	1078341	No	No	No	No	No	WA-581

The Summary Report format provides highlighted links to the different data types offered in the hydrogeologic section of DBHYDRO. The link to time series data will bring up a list of all time series for this station including water quality and hydrologic data.

Clicking on the 'Yes' link under Lithologic for station W-12425, produces a detailed lithologic description as shown below:



DBHYDRO Browser - Microsoft Internet Explorer provided by SFWMD

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Lithologic Details

Station	X-Coord. (feet)	Y-Coord. (feet)
W-12425	956543	820434

Min. Depth	Max. Depth	Primary Rock	% Primary Rock	Primary Color	Induration	% Porosity	
0	200	SAND (QUARTZ)		DARK YELLOWISH ORANGE	UNCONSOLIDATED		
200	300	SAND (QUARTZ)		DARK YELLOWISH ORANGE	UNCONSOLIDATED		
300	450	SAND (QUARTZ)		YELLOWISH GRAY	UNCONSOLIDATED		SAMPLE INCLUDES A
450	600	SAND (QUARTZ)		YELLOWISH GRAY	UNCONSOLIDATED		SAMPLE INCLUDES A
600	800	SAND (QUARTZ)		YELLOWISH GRAY	UNCONSOLIDATED		SAMPLE INCLUDES A
800	900	SAND (QUARTZ)		YELLOWISH GRAY	UNCONSOLIDATED		SAMPLE INCLUDES A
900	1100	SAND (QUARTZ)		YELLOWISH GRAY	UNCONSOLIDATED		SAMPLE INCLUDES A
1100	1250	SAND (QUARTZ)		YELLOWISH GRAY	UNCONSOLIDATED		
1250	1300	SAND (QUARTZ)		YELLOWISH GRAY	UNCONSOLIDATED		
1300	1350	SAND (QUARTZ)		YELLOWISH GRAY	UNCONSOLIDATED		SAMPLE INCLUDES A ORLY CONSOLIDATEI
1350	1400	SAND (QUARTZ)		YELLOWISH GRAY	UNCONSOLIDATED		SAMPLE INCLUDES A ORLY CONSOLIDATEI
1400	1500	SAND (QUARTZ)		YELLOWISH GRAY	UNCONSOLIDATED		SAMPLE CONTAINS S RLY CONSOLIDATED ED ALLOCHEMS, ANI TAL LIMESTONE CH
1500	1640	SAND (QUARTZ)		YELLOWISH GRAY	UNCONSOLIDATED		SAMPLE INCLUDES T F PELLETAL LIMES
1640	1750	SAND (QUARTZ)		YELLOWISH GRAY	UNCONSOLIDATED		SAMPLE CONTAINS A RACE AMOUNTS OF I ND SOME FROSTED S
1750	1900	LIMESTONE		MODERATE BLUISH GRAY	MODERATE		SAMPLE INCLUDES I
1900	2050	LIMESTONE		MODERATE BLUISH GRAY	MODERATE		LIMESTONE CUTTING T IS GREATER, ANI HE SAND.
2050	2200	LIMESTONE		YELLOWISH GRAY	MODERATE		LIMESTONE IS LESS LL FRAGMENTS.
2200	2350	LIMESTONE		YELLOWISH GRAY	POOR		
2350	2500	LIMESTONE		LIGHT GREENISH YELLOW	POOR		LOOSE PELLETS ARE ELLETS IN THE LI
2500	2800	LIMESTONE		VERY LIGHT ORANGE	POOR		SAMPLE IS A MIXTU AND, AND CALCITE
2800	2950	SANDSTONE		LIGHT OLIVE GRAY	POOR		HALF OF THE PIECI
2950	3250	SAND (QUARTZ)		OLIVE GRAY	UNCONSOLIDATED		SAMPLE INCLUDES I RITIC SANDSTONE. ALS.
3250	3450	SAND (QUARTZ)		LIGHT OLIVE GRAY	POOR		SAMPLE ALSO INCLU PELLETAL LIMESTO

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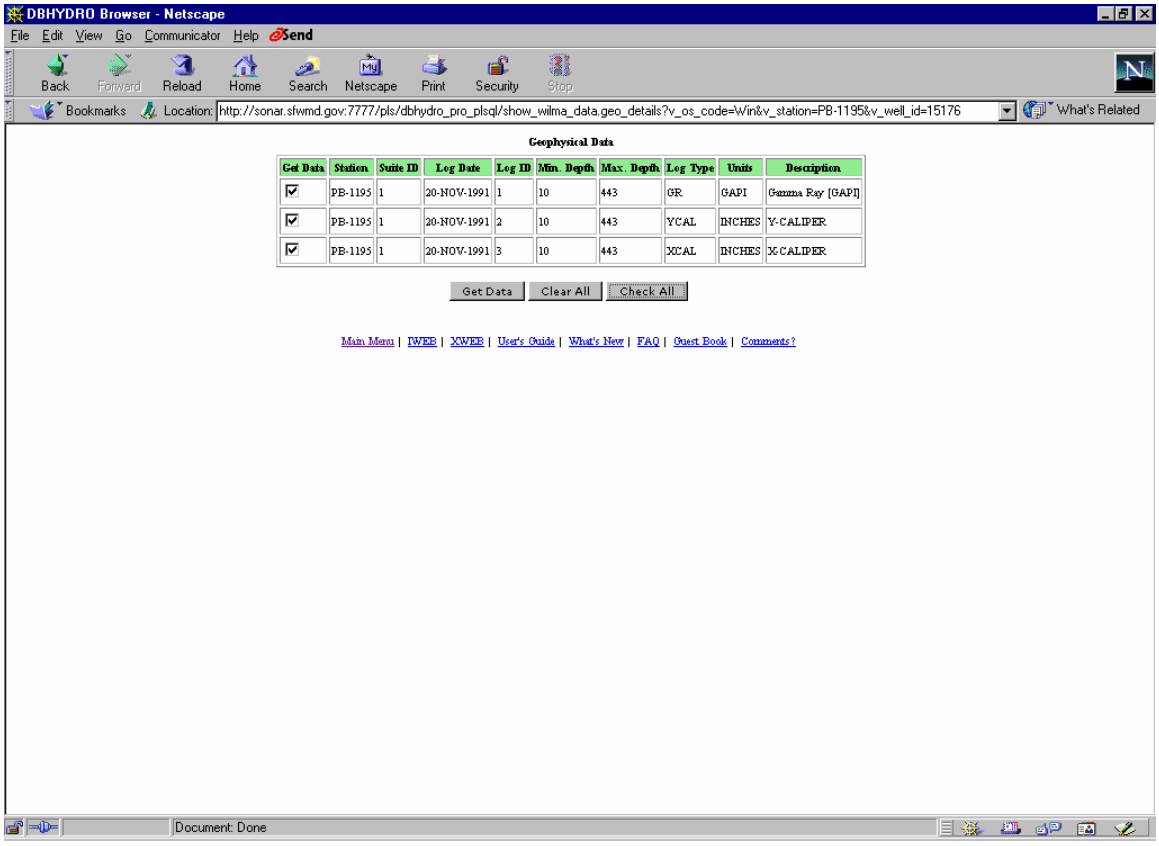
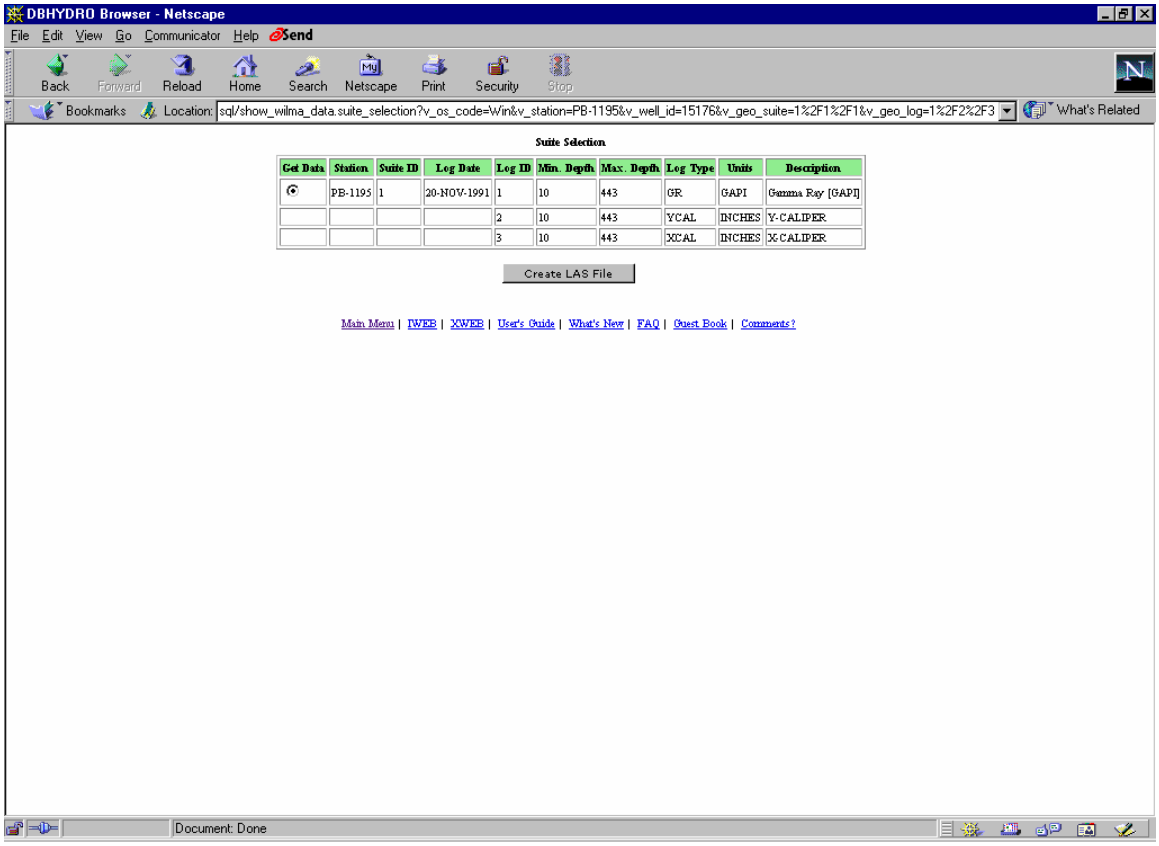
This information can be saved to a text file (save as .txt) through the web browser File menu.

Clicking on the summary report 'Yes' link under the Geophysics datatype takes you through a series of screens which allow you to create a file in Log ASCII Standard format (LAS).




DBHYDRO Browser - Netscape
File Edit View Go Communicator Help Send
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Location: sql/show_wilma_data.suite_selection?v_os_code=Win&v_station=PB-1195&v_well_id=15176&v_geo_suite=1%2F1%2F1&v_geo_log=1%2F2%2F3
What's Related
Suite Selection
Get Data | Station | Suite ID | Log Date | Log ID | Min. Depth | Max. Depth | Log Type | Units | Description
PB-1195 | 1 | 20-NOV-1991 | 1 | 10 | 443 | GR | GAPI | Gamma Ray [GAPI]
2 | 10 | 443 | YCAL | INCHES | Y-CALIPER
3 | 10 | 443 | XCAL | INCHES | X-CALIPER
Create LAS File
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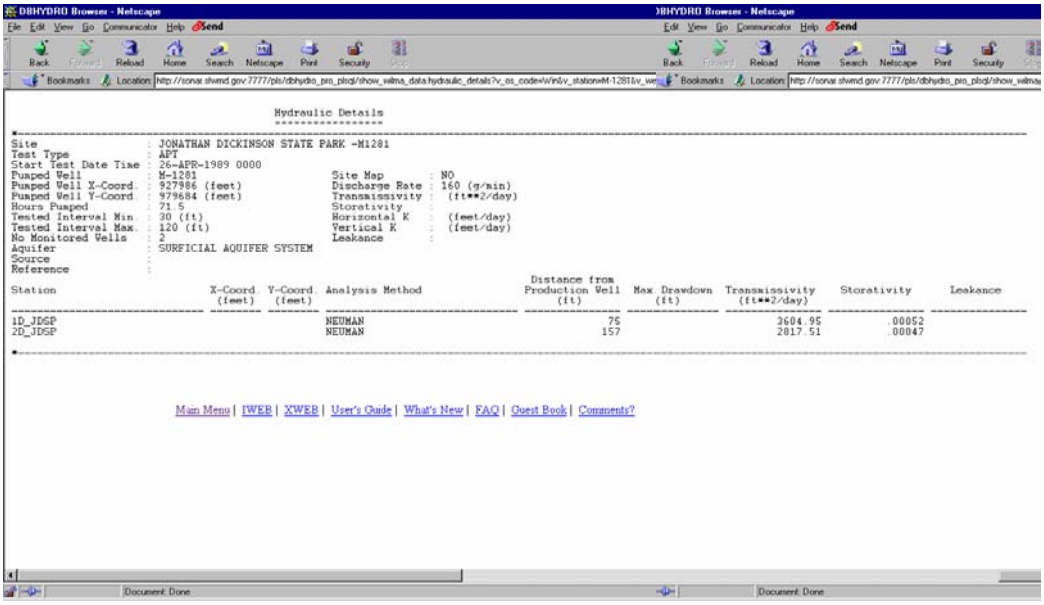
```
~VERSION INFORMATION
 VERS.              2.0: CWLS LOG ASCII STANDARD -VERSION 2.0
 WRAP.               NO: ONE LINE PER DEPTH STEP
~WELL INFORMATION
#MNEM.UNIT                     DATA VALUE                      DATA DESCRIPTION
#--------- -------------------------------------------------  -----------------
 STRT.FT                                                10.00: Starting Depth
 STOP.FT                                               443.00: Ending Depth
 STEP.FT                                                 0.50: Level Spacing
 NULL.                                                -999.25: Null Value
 COMP.               Output from SFWMD Hydrogeologic Database: Company
 WELL.                                                PB-1195: Well
 FLD .                                    BOYNTON BEACH MW-1: Field
 LOC .                         Latitude 263049, Longitude 800345: Location
 PROV.                                   PALM BEACH, FLORIDA: County and State
 SRVC.                          FLORIDA GEOPHYSICAL LOGGING INC.: Service Company
 DATE.                                        20-NOV-1991: Log Date
 UWI .                                                  1: Unique Suite Id
 LIC .                                                  : License Number
~CURVE INFORMATION
#MNEM.UNIT              API CODE    CURVE DESCRIPTION
#------------------- ------------  ------------------------------------------
 DEPT.FT                          : Depth
 GR  .GAPI                        : Gamma Ray [GAPI]
 YCAL.INCHES                      : Y-CALIPER
 XCAL.INCHES                      : X-CALIPER
~PARAMETER INFORMATION
#MNEM.UNIT               VALUE      PARAMETER DESCRIPTION
#-------------------- ------------  ----------------------------------------
 LSE .FT                    18.90: Land Surface Elevation
 LSD .                      NGVD29: Land Surface Datum
 DW  .IN                         : Diameter of Well
 TDW .FT                    325.00: Total Finished Depth of Well
 TDC .FT                    300.00: Total Finished Depth of Casing
 EKB .FT                      0.00: Kelly Bushing
 EDF .FT                      0.00: Drilling Floor
~A   DEPTH      GR       YCAL      XCAL
       10.00      9.54     10.06     11.10
       10.50      9.54      6.89      7.45
       11.00      9.34      6.51      7.09
       11.50      8.92      6.49      7.06
       12.00      8.66      6.53      7.07
       12.50      8.38      6.60      7.13
       13.00      8.00      6.73      7.30
       13.50      7.10      6.96      7.51
       14.00      6.51      7.21      7.69
       14.50      6.23      7.47      8.15
       15.00      5.94      7.84      8.54
       15.50      5.89      8.07      8.80
       16.00      6.06      8.20      8.85
       16.50      6.33      8.26      8.71
       17.00      6.70      7.69      8.05
       17.50      7.47      6.79      6.73
       18.00      7.79      5.79      6.25
       18.50      8.51      5.69      6.03
       19.00      9.01      5.62      5.93
       19.50      9.58      5.57      5.90
       20.00     10.17      5.57      5.89
```

Example of Geophysical Data Exported from DBHYDRO Browser to LAS Format

Clicking on the summary report 'Yes' link under the Hydraulic data takes you to a screen showing the aquifer characteristics, test details, and analysis methods employed for any aquifer performance tests associated with the well.



DBHYDRO Browser - Netscape

Hydraulic Details

Site	: JONATHAN DICKINSON STATE PARK -M1281		
Test Type	: APT		
Start Test Date Time	: 26-APR-1989 0000		
Pumped Well	: M-1281	Site Map	: NO
Pumped Well X-Coord	: 927986 (feet)	Discharge Rate	: 160 (g/min)
Pumped Well Y-Coord	: 979684 (feet)	Transmissivity	: (ft**2/day)
Hours Pumped	: 71.5	Storativity	:
Tested Interval Min	: 30 (ft)	Horizontal K	: (feet/day)
Tested Interval Max	: 120 (ft)	Vertical K	: (feet/day)
No Monitored Wells	: 2	Leakance	:
Aquifer	: SURFICIAL AQUIFER SYSTEM		
Source	:		
Reference	:		

Station	X-Coord (feet)	Y-Coord (feet)	Analysis Method	Distance from Production Well (ft)	Max Drawdown (ft)	Transmissivity (ft**2/day)	Storativity	Leakance
1D_JDSP			NEUMAN	75		3604.95	.00052	
2D_JDSP			NEUMAN	157		2817.51	.00047	

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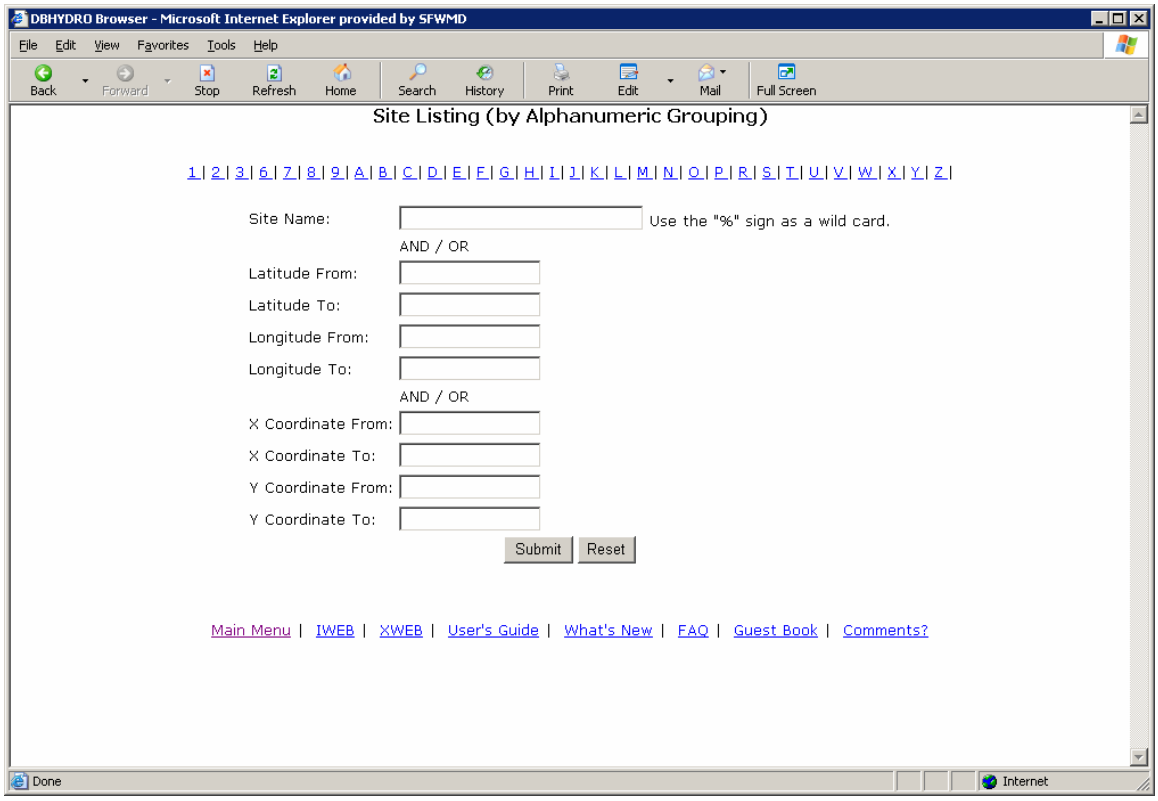
Document: Done

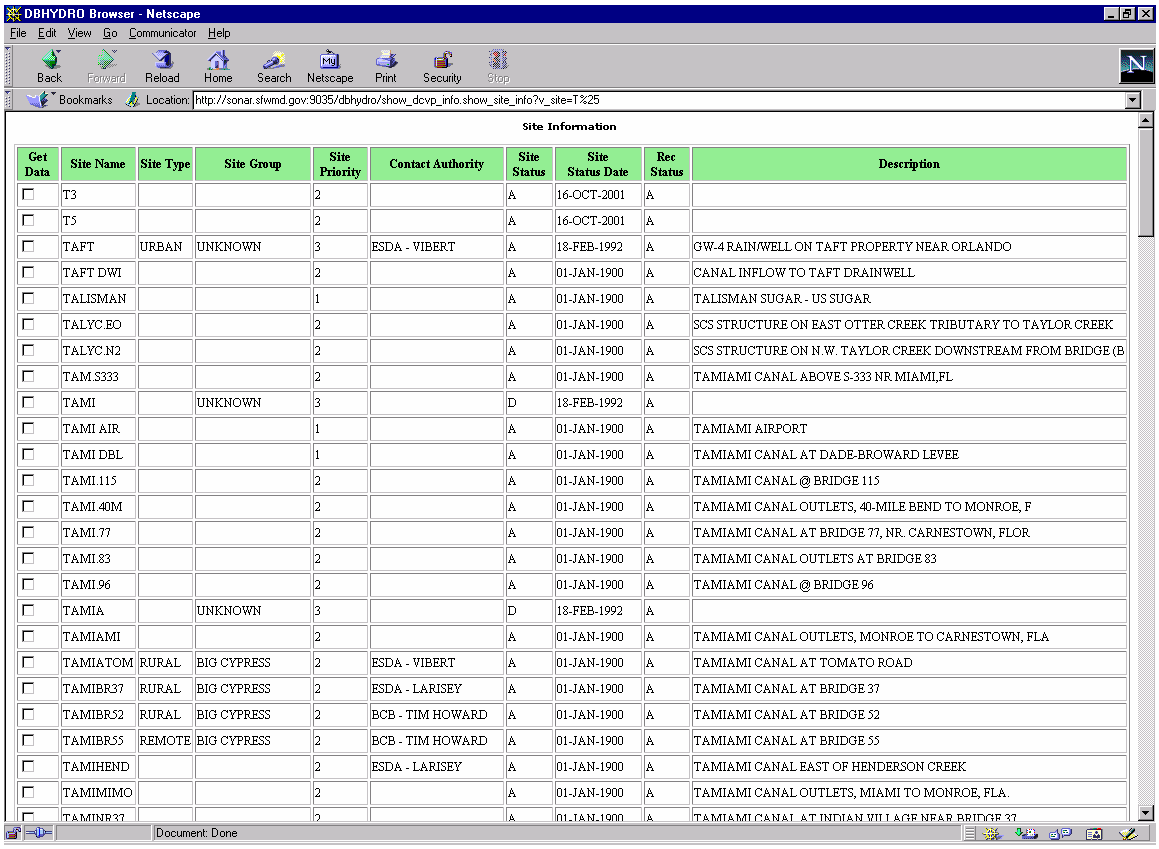
Access by Site Name

Sites represent a collection of stations. Therefore, you can gain access to a group of related stations by accessing a single site. By virtue of this "one-to-many" relationship, the site listing will always be shorter than the station listing. Selecting "Access By Site Name" from the DBHYDRO Browser menu brings up the following:



On this screen you can select the letter that corresponds with the first letter of the name of the site in which you are interested. Alternatively you can type in the name of the site in which you are interested. The percent sign "%" can be used as a wildcard character. You may also select by a lat-lon or x-y box. X-Y coordinates are Florida state plane NAD83 HARN East Zone in units of feet.

In this example we show selection by letter. Once a letter is selected, a list of database sites beginning with the selected letter will appear as follows:

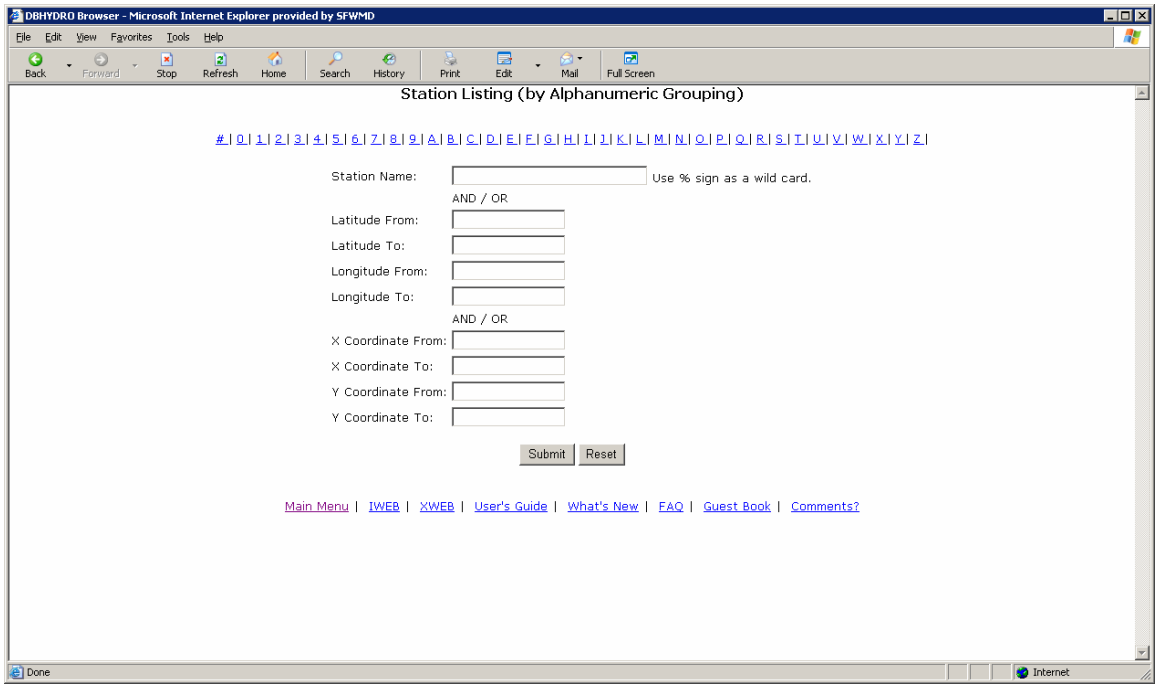


Get Data	Site Name	Site Type	Site Group	Site Priority	Contact Authority	Site Status	Site Status Date	Rec Status	Description
☐	T3			2		A	16-OCT-2001	A	
☐	T5			2		A	16-OCT-2001	A	
☐	TAFT	URBAN	UNKNOWN	3	ESDA - VIBERT	A	18-FEB-1992	A	GW-4 RAIN/WELL ON TAFT PROPERTY NEAR ORLANDO
☐	TAFT DWI			2		A	01-JAN-1900	A	CANAL INFLOW TO TAFT DRAINWELL
☐	TALISMAN			1		A	01-JAN-1900	A	TALISMAN SUGAR - US SUGAR
☐	TALYC.EO			2		A	01-JAN-1900	A	SCS STRUCTURE ON EAST OTTER CREEK TRIBUTARY TO TAYLOR CREEK
☐	TALYC.N2			2		A	01-JAN-1900	A	SCS STRUCTURE ON N.W. TAYLOR CREEK DOWNSTREAM FROM BRIDGE (B
☐	TAM.S333			2		A	01-JAN-1900	A	TAMIAMI CANAL ABOVE S-333 NR MIAMI,FL
☐	TAMI		UNKNOWN	3		D	18-FEB-1992	A	
☐	TAMI AIR			1		A	01-JAN-1900	A	TAMIAMI AIRPORT
☐	TAMI DBL			1		A	01-JAN-1900	A	TAMIAMI CANAL AT DADE-BROWARD LEVEE
☐	TAMI.115			2		A	01-JAN-1900	A	TAMIAMI CANAL @ BRIDGE 115
☐	TAMI.40M			2		A	01-JAN-1900	A	TAMIAMI CANAL OUTLETS, 40-MILE BEND TO MONROE, F
☐	TAMI.77			2		A	01-JAN-1900	A	TAMIAMI CANAL AT BRIDGE 77, NR. CARNESTOWN, FLOR
☐	TAMI.83			2		A	01-JAN-1900	A	TAMIAMI CANAL OUTLETS AT BRIDGE 83
☐	TAMI.96			2		A	01-JAN-1900	A	TAMIAMI CANAL @ BRIDGE 96
☐	TAMIA		UNKNOWN	3		D	18-FEB-1992	A	
☐	TAMIAMI			2		A	01-JAN-1900	A	TAMIAMI CANAL OUTLETS, MONROE TO CARNESTOWN, FLA
☐	TAMIATOM	RURAL	BIG CYPRESS	2	ESDA - VIBERT	A	01-JAN-1900	A	TAMIAMI CANAL AT TOMATO ROAD
☐	TAMIBR37	RURAL	BIG CYPRESS	2	ESDA - LARISEY	A	01-JAN-1900	A	TAMIAMI CANAL AT BRIDGE 37
☐	TAMIBR52	RURAL	BIG CYPRESS	2	BCB - TIM HOWARD	A	01-JAN-1900	A	TAMIAMI CANAL AT BRIDGE 52
☐	TAMIBR55	REMOTE	BIG CYPRESS	2	BCB - TIM HOWARD	A	01-JAN-1900	A	TAMIAMI CANAL AT BRIDGE 55
☐	TAMIHEND			2	ESDA - LARISEY	A	01-JAN-1900	A	TAMIAMI CANAL EAST OF HENDERSON CREEK
☐	TAMIMIMO			2		A	01-JAN-1900	A	TAMIAMI CANAL OUTLETS, MIAMI TO MONROE, FLA.
☐	TAMINB37			2		A	01-JAN-1900	A	TAMIAMI CANAL AT INDIAN VILLAGE NEAR BRIDGE 37

In this example the letter "T" was selected to generate the list of sites indicated. Each of the site names is hyperlinked to information about that site, an example of which is in the Surface Water Data section. One may also get data by site through this screen by checking the “Get Data” box for each site of interest.

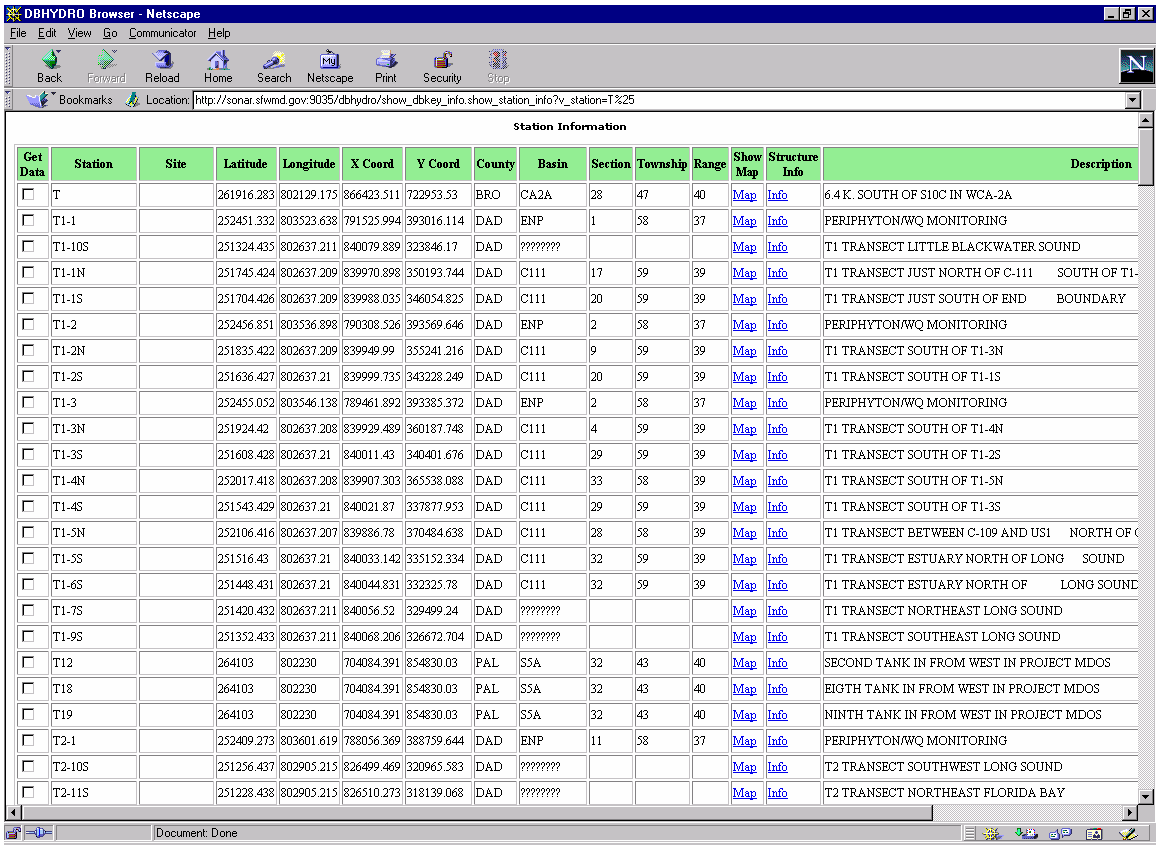
Access by Station Name

Selecting "Station Listing" from the DBHYDRO Browser menu brings up the following screen:



On this screen you can select the letter that corresponds with the first letter of the name of the station in which you are interested. Alternatively you can type in the name of the station in which you are interested. The percent sign "%" can be used as a wildcard character. You may also select by a lat-lon or x-y box. X-Y coordinates are Florida state plane NAD83 East Zone in units of feet.

In this example we show selection by letter. Once a letter is selected, a list of database stations beginning with the selected letter will appear as follows:



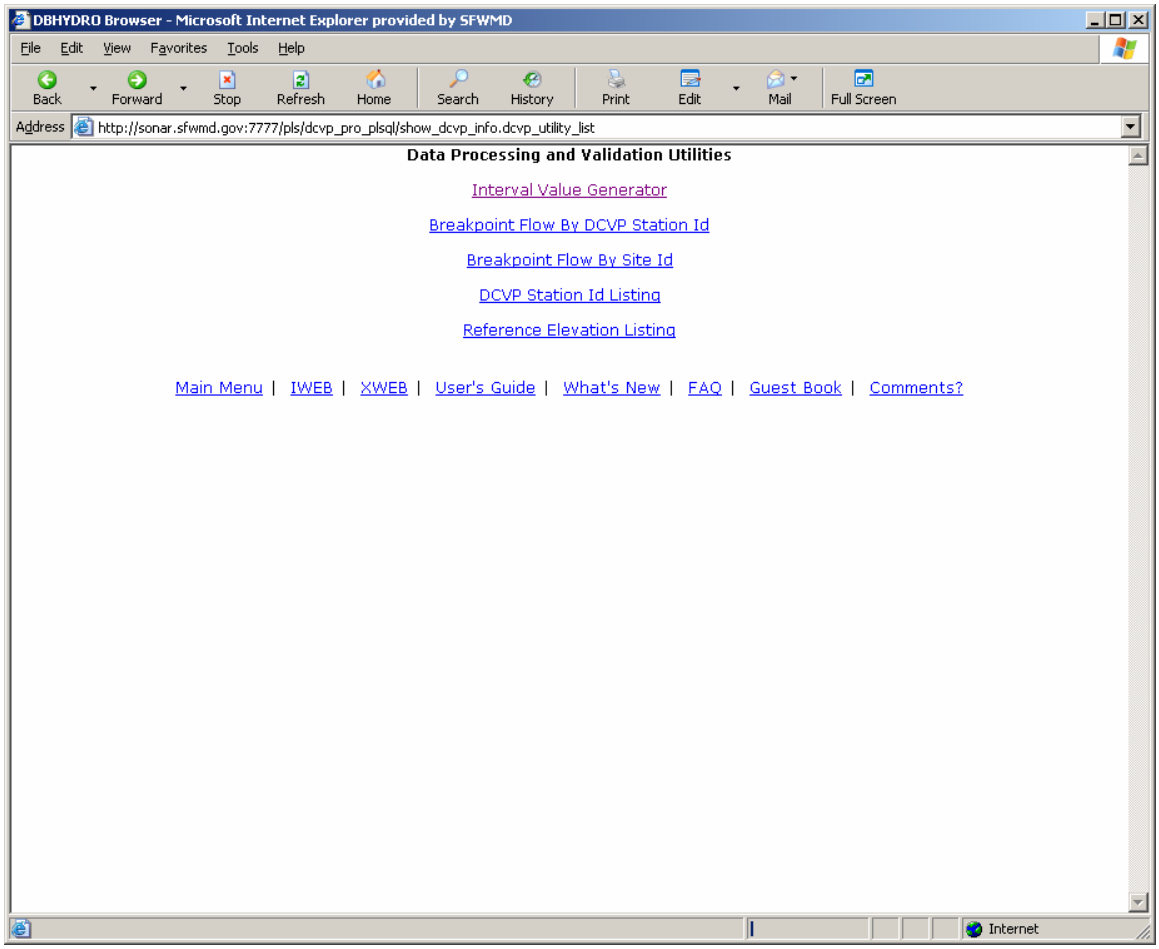
Get Data	Station	Site	Latitude	Longitude	X Coord	Y Coord	County	Basin	Section	Township	Range	Show Map	Structure Info	Description
☐	T		261916.283	802129.175	866423.511	722953.53	BRO	CA2A	28	47	40	Map	Info	6.4 K. SOUTH OF S10C IN WCA-2A
☐	T1-1		252451.332	803523.638	791525.994	393016.114	DAD	ENP	1	58	37	Map	Info	PERIPHYTON/WQ MONITORING
☐	T1-10S		251324.435	802637.211	840079.889	323846.17	DAD	????????				Map	Info	T1 TRANSECT LITTLE BLACKWATER SOUND
☐	T1-1N		251745.424	802637.209	839970.898	350193.744	DAD	C111	17	59	39	Map	Info	T1 TRANSECT JUST NORTH OF C-111 SOUTH OF T1-
☐	T1-1S		251704.426	802637.209	839988.035	346054.825	DAD	C111	20	59	39	Map	Info	T1 TRANSECT JUST SOUTH OF END BOUNDARY
☐	T1-2		252456.851	803536.898	790308.526	393569.646	DAD	ENP	2	58	37	Map	Info	PERIPHYTON/WQ MONITORING
☐	T1-2N		251835.422	802637.209	839949.99	355241.216	DAD	C111	9	59	39	Map	Info	T1 TRANSECT SOUTH OF T1-3N
☐	T1-2S		251636.427	802637.21	839999.735	343228.249	DAD	C111	20	59	39	Map	Info	T1 TRANSECT SOUTH OF T1-1S
☐	T1-3		252455.052	803546.138	789461.892	393385.372	DAD	ENP	2	58	37	Map	Info	PERIPHYTON/WQ MONITORING
☐	T1-3N		251924.42	802637.208	839929.489	360187.748	DAD	C111	4	59	39	Map	Info	T1 TRANSECT SOUTH OF T1-4N
☐	T1-3S		251608.428	802637.21	840011.43	340401.676	DAD	C111	29	59	39	Map	Info	T1 TRANSECT SOUTH OF T1-2S
☐	T1-4N		252017.418	802637.208	839907.303	365538.088	DAD	C111	33	58	39	Map	Info	T1 TRANSECT SOUTH OF T1-5N
☐	T1-4S		251543.429	802637.21	840021.87	337877.953	DAD	C111	29	59	39	Map	Info	T1 TRANSECT SOUTH OF T1-3S
☐	T1-5N		252106.416	802637.207	839886.78	370484.638	DAD	C111	28	58	39	Map	Info	T1 TRANSECT BETWEEN C-109 AND US1 NORTH OF (
☐	T1-5S		251516.43	802637.21	840033.142	335152.334	DAD	C111	32	59	39	Map	Info	T1 TRANSECT ESTUARY NORTH OF LONG SOUND
☐	T1-6S		251448.431	802637.21	840044.831	332325.78	DAD	C111	32	59	39	Map	Info	T1 TRANSECT ESTUARY NORTH OF LONG SOUND
☐	T1-7S		251420.432	802637.211	840056.52	329499.24	DAD	????????				Map	Info	T1 TRANSECT NORTHEAST LONG SOUND
☐	T1-9S		251352.433	802637.211	840068.206	326672.704	DAD	????????				Map	Info	T1 TRANSECT SOUTHEAST LONG SOUND
☐	T12		264103	802230	704084.391	854830.03	PAL	SSA	32	43	40	Map	Info	SECOND TANK IN FROM WEST IN PROJECT MDOS
☐	T18		264103	802230	704084.391	854830.03	PAL	SSA	32	43	40	Map	Info	EIGTH TANK IN FROM WEST IN PROJECT MDOS
☐	T19		264103	802230	704084.391	854830.03	PAL	SSA	32	43	40	Map	Info	NINTH TANK IN FROM WEST IN PROJECT MDOS
☐	T2-1		252409.273	803601.619	788056.369	388759.644	DAD	ENP	11	58	37	Map	Info	PERIPHYTON/WQ MONITORING
☐	T2-10S		251256.437	802905.215	826499.469	320965.583	DAD	????????				Map	Info	T2 TRANSECT SOUTHWEST LONG SOUND
☐	T2-11S		251228.438	802905.215	826510.273	318139.068	DAD	????????				Map	Info	T2 TRANSECT NORTHEAST FLORIDA BAY

In this example the letter "T" was selected to generate the list of stations indicated. Each of the station names is hyperlinked to information about that station, an example of which is in the Surface Water Data section. One may also get data by station through this screen by checking the “Get Data” box for each station of interest.

Data Processing and Validation Utilities

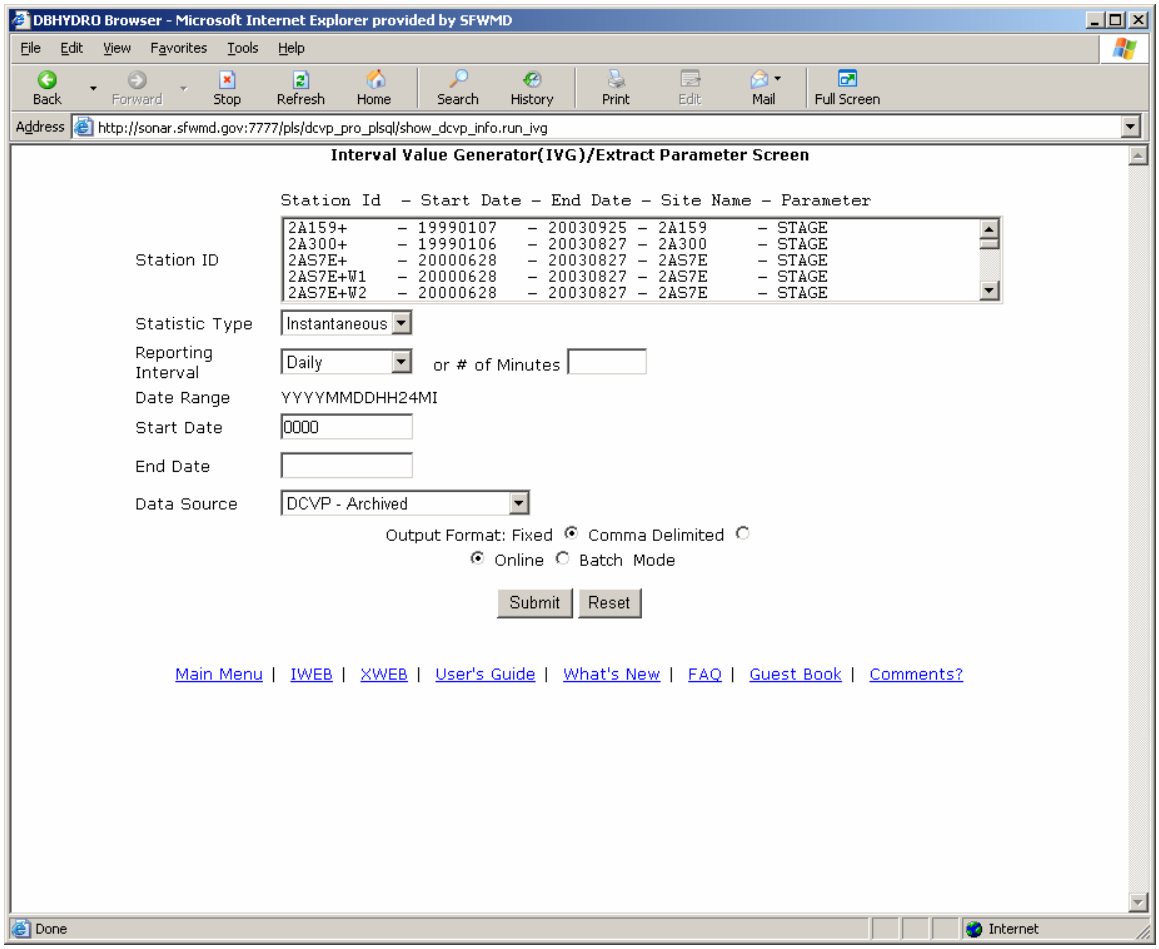
This option is available on the SFMWD intranet only.

These utilities are primarily used by the SFWMD Engineering Associates who handle the routine processing of instrument readings and perform quality assurance on these readings prior to archival in the corporate database. This list of utilitites will expand as development of this component of the DBHYDRO Browser continues.



Interval Value Generator

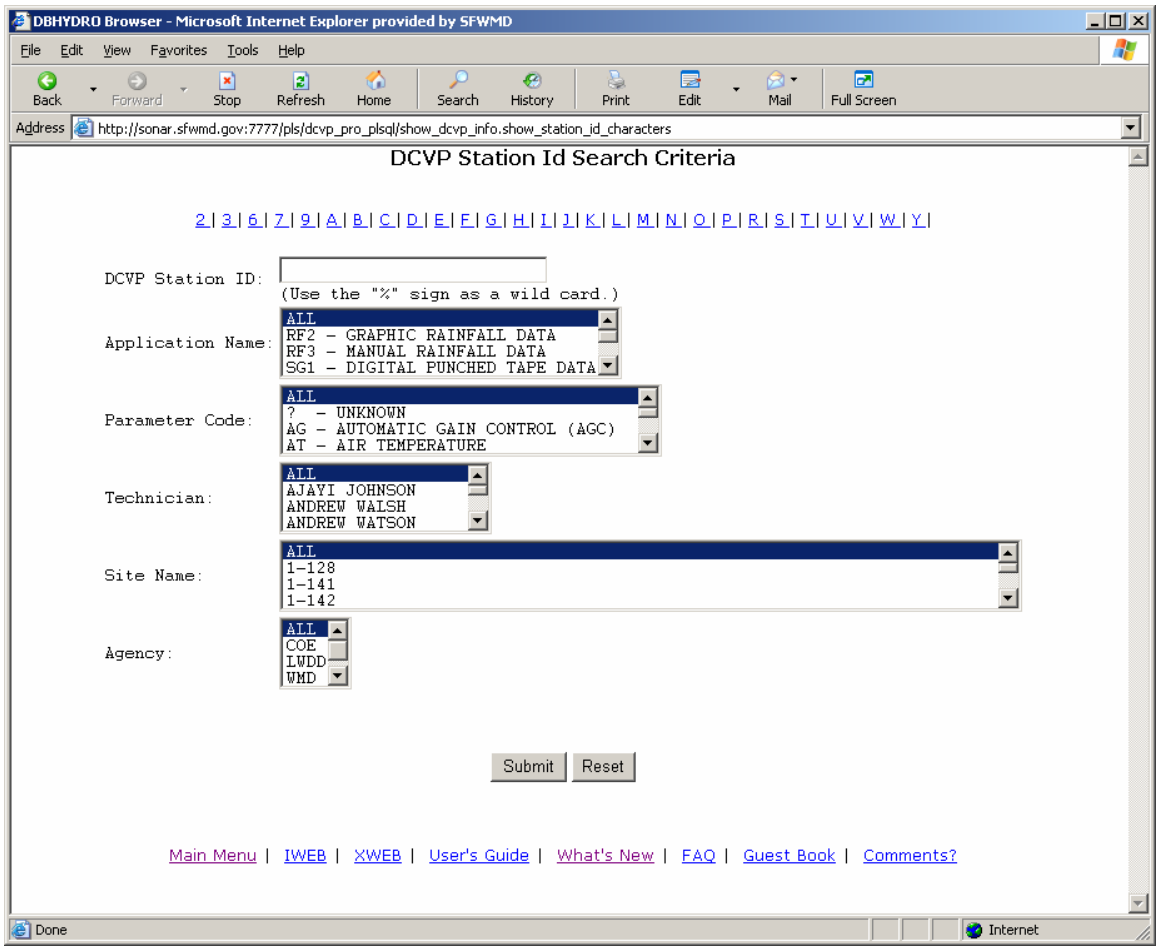
Selecting "Interval Value Generator" brings you to the following screen:



The Interval Value Generator (IVG) program allows the user to generate summarized statistical information from any individual or group of individual DCVP Station_ids. Each station_id is considered to be a set of readings from a single sensor or device. IVG can be used to create mean daily values, maximum hourly values, and minimum monthly values, etc… The user may define any date range of interst. IVG works with archived, provisional, and real-time data. Output may be online or via batch job. Batch jobs send email notification when complete.

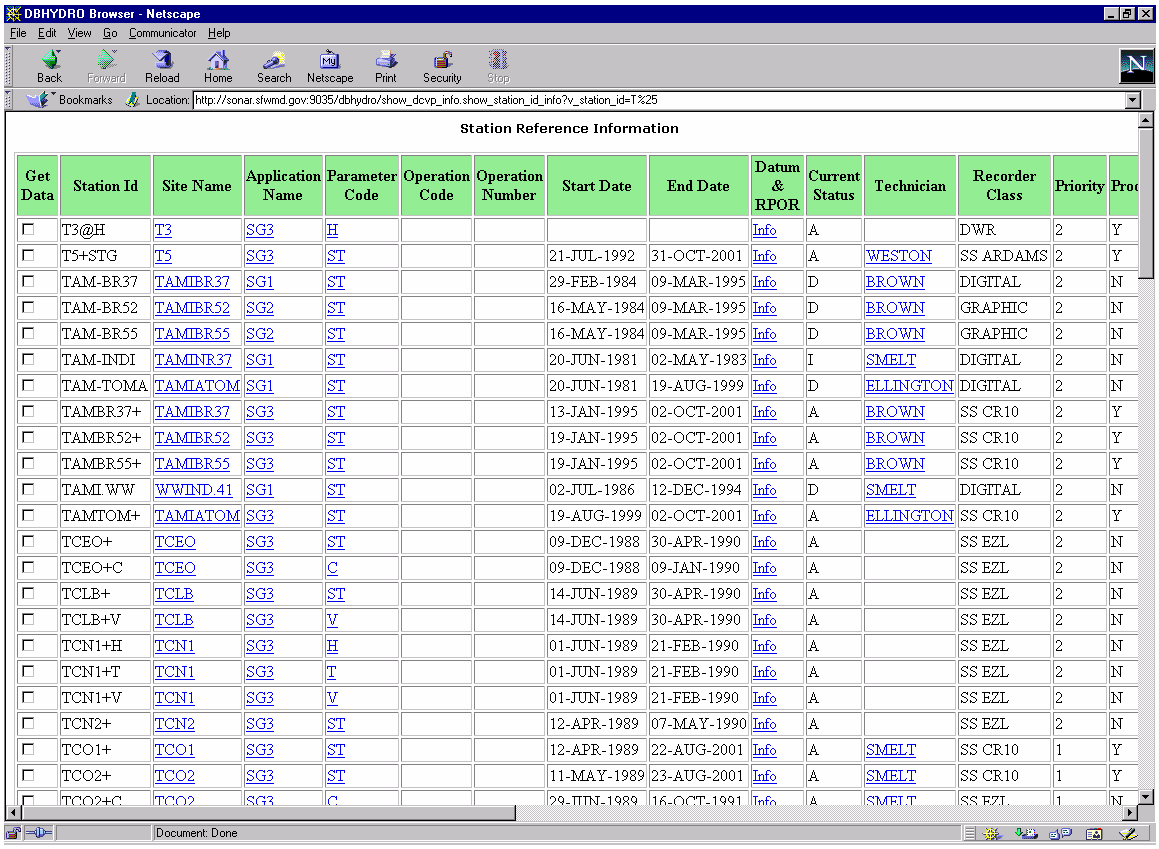
DCVP Station Id Listing

Returning to the Data Processing and Validation Utilities menu affords us other options. The Data Collection Validation Processing (DCVP) system station reference table may be accessed by selecting "DCVP Station ID Listing". The selection leads to this screen:



The user may select all station_ids (timeseries) starting with a given character or query by station_id name (including the % as the wildcard character), application name (the processing method), the parameter code, the technician assigned to the station, the site name, or the agency from whom the data is received.

In this example, we keep it simple…
Selecting the letter "T" generates a list of all DCVP station ids beginning with the letter "T":

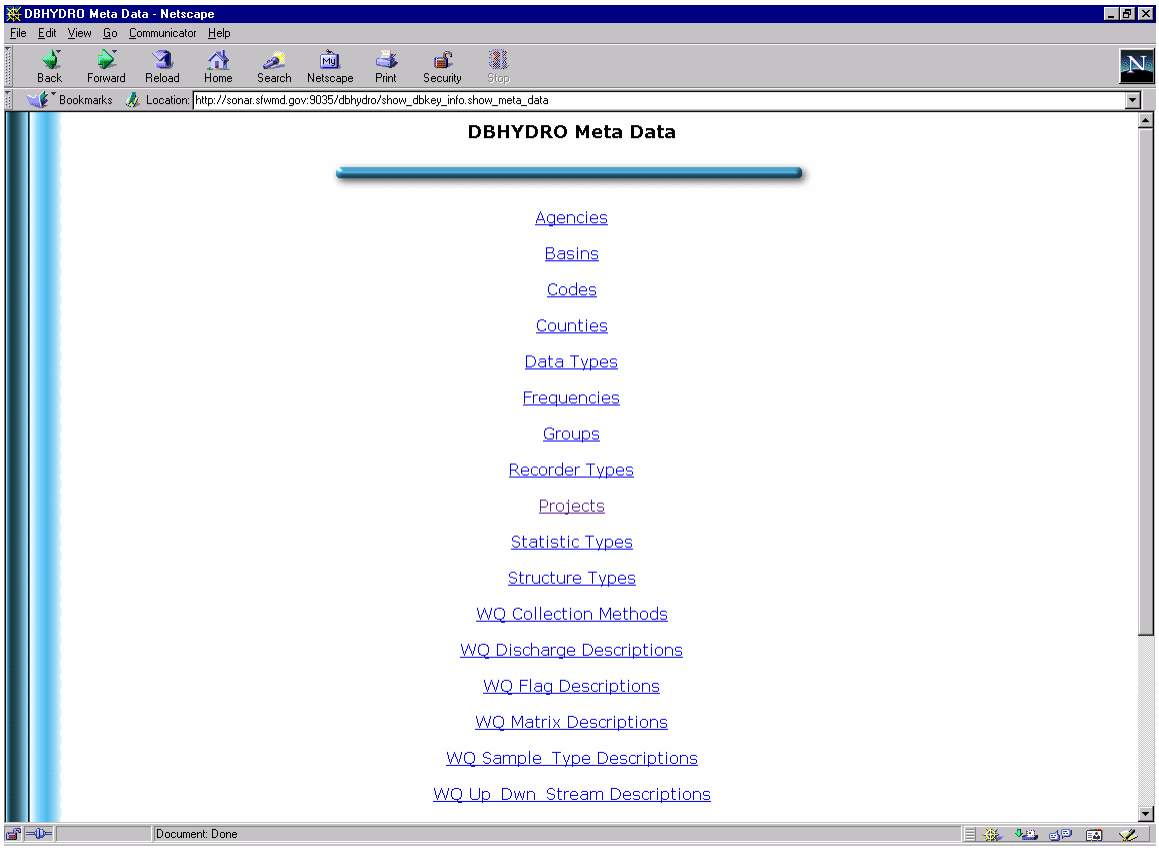


Get Data	Station Id	Site Name	Application Name	Parameter Code	Operation Code	Operation Number	Start Date	End Date	Datum & RPOR	Current Status	Technician	Recorder Class	Priority	Proc
☐	T3@H	T3	SG3	H					Info	A		DWR	2	Y
☐	T5+STG	T5	SG3	ST			21-JUL-1992	31-OCT-2001	Info	A	WESTON	SS ARDAMS	2	Y
☐	TAM-BR37	TAMIBR37	SG1	ST			29-FEB-1984	09-MAR-1995	Info	D	BROWN	DIGITAL	2	N
☐	TAM-BR52	TAMIBR52	SG2	ST			16-MAY-1984	09-MAR-1995	Info	D	BROWN	GRAPHIC	2	N
☐	TAM-BR55	TAMIBR55	SG2	ST			16-MAY-1984	09-MAR-1995	Info	D	BROWN	GRAPHIC	2	N
☐	TAM-INDI	TAMINR37	SG1	ST			20-JUN-1981	02-MAY-1983	Info	I	SMELT	DIGITAL	2	N
☐	TAM-TOMA	TAMIATOM	SG1	ST			20-JUN-1981	19-AUG-1999	Info	D	ELLINGTON	DIGITAL	2	N
☐	TAMBR37+	TAMIBR37	SG3	ST			13-JAN-1995	02-OCT-2001	Info	A	BROWN	SS CR10	2	Y
☐	TAMBR52+	TAMIBR52	SG3	ST			19-JAN-1995	02-OCT-2001	Info	A	BROWN	SS CR10	2	Y
☐	TAMBR55+	TAMIBR55	SG3	ST			19-JAN-1995	02-OCT-2001	Info	A	BROWN	SS CR10	2	Y
☐	TAMI WW	WWIND.41	SG1	ST			02-JUL-1986	12-DEC-1994	Info	D	SMELT	DIGITAL	2	N
☐	TAMTOM+	TAMIATOM	SG3	ST			19-AUG-1999	02-OCT-2001	Info	A	ELLINGTON	SS CR10	2	Y
☐	TCEO+	TCEO	SG3	ST			09-DEC-1988	30-APR-1990	Info	A		SS EZL	2	N
☐	TCEO+C	TCEO	SG3	C			09-DEC-1988	09-JAN-1990	Info	A		SS EZL	2	N
☐	TCLB+	TCLB	SG3	ST			14-JUN-1989	30-APR-1990	Info	A		SS EZL	2	N
☐	TCLB+V	TCLB	SG3	V			14-JUN-1989	30-APR-1990	Info	A		SS EZL	2	N
☐	TCN1+H	TCN1	SG3	H			01-JUN-1989	21-FEB-1990	Info	A		SS EZL	2	N
☐	TCN1+T	TCN1	SG3	T			01-JUN-1989	21-FEB-1990	Info	A		SS EZL	2	N
☐	TCN1+V	TCN1	SG3	V			01-JUN-1989	21-FEB-1990	Info	A		SS EZL	2	N
☐	TCN2+	TCN2	SG3	ST			12-APR-1989	07-MAY-1990	Info	A		SS EZL	2	N
☐	TCO1+	TCO1	SG3	ST			12-APR-1989	22-AUG-2001	Info	A	SMELT	SS CR10	1	Y
☐	TCO2+	TCO2	SG3	ST			11-MAY-1989	23-AUG-2001	Info	A	SMELT	SS CR10	1	Y
☐	TCO2+C	TCO2	SG3	C			29-JUN-1989	16-OCT-1991	Info	A	SMELT	SS EZL	1	N

There is an extensive list of DCVP station id attributes, several of which are hyperlinked to other related tables.

Meta Data

Meta data includes descriptive information about the context, quality and condition, or characteristics of the data. In the case of DBHYDRO, each of the attributes of a time series is such meta data. The domains from which these attributes are drawn are accessible by selecting the Meta Data option from the main page.
Upon selection, the following DBHYDRO Meta Data screen appears:



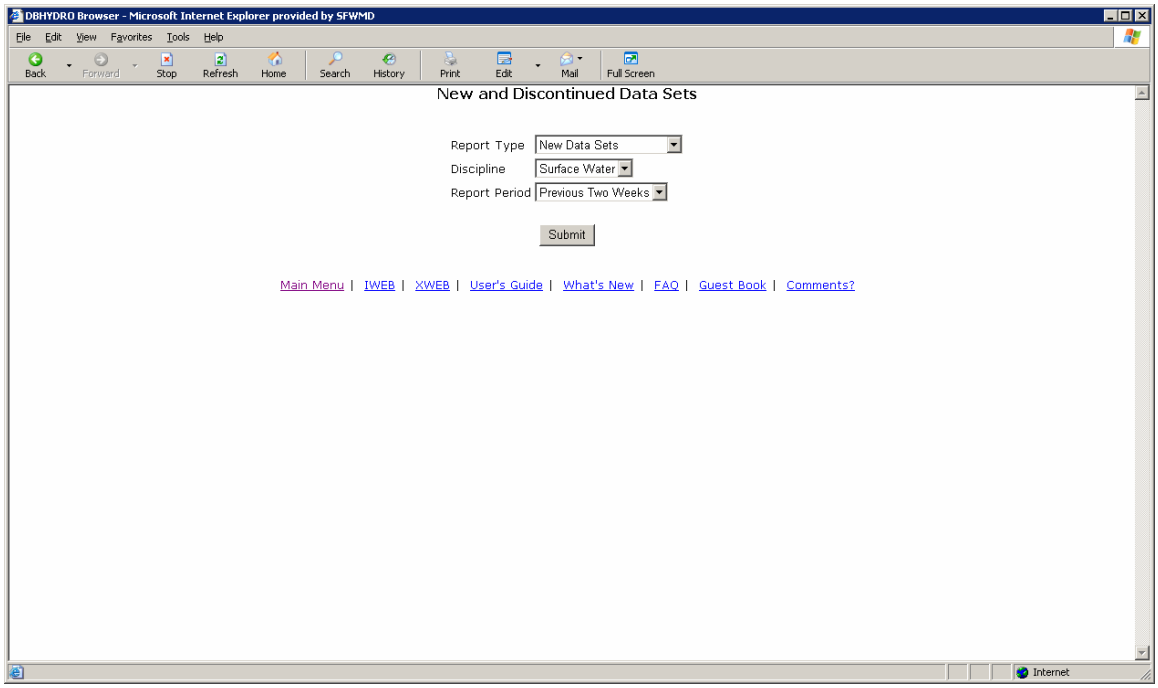
Selecting any one of the items generates an up-to-date list of valid values directly from the database. The option for "Database Table Rows" (off the bottom of the screen) is useful for those of you who are writing your own queries against the database. By accessing this option you can find out how big or small each database table is. Such information is helpful in writing custom programs.

Miscellaneous Items and Reports

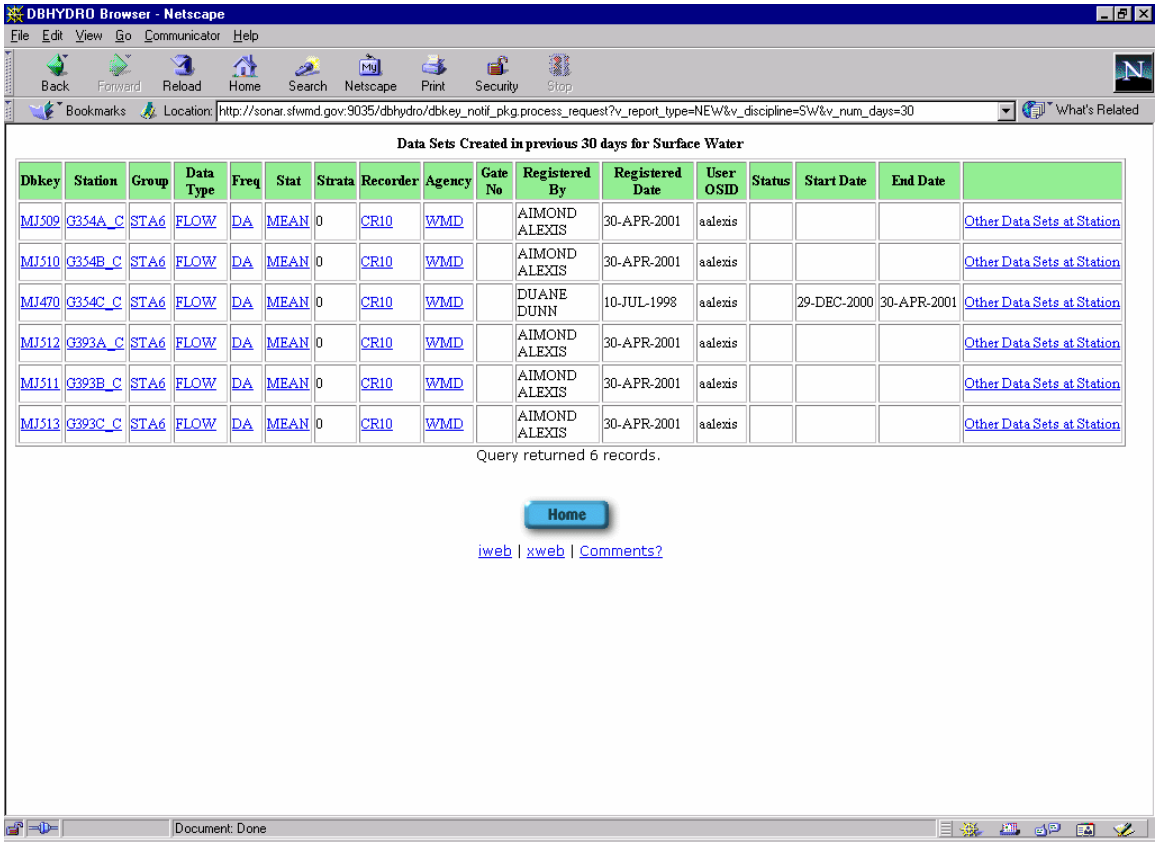
New and Discontinued Data Sets

New data sets are continually added to the database. Monitoring may also be discontinued or changed from one method to another. This feature provides information on these types of additions and changes to the database.

Selecting New and Discontinued Data Sets results in this screen…

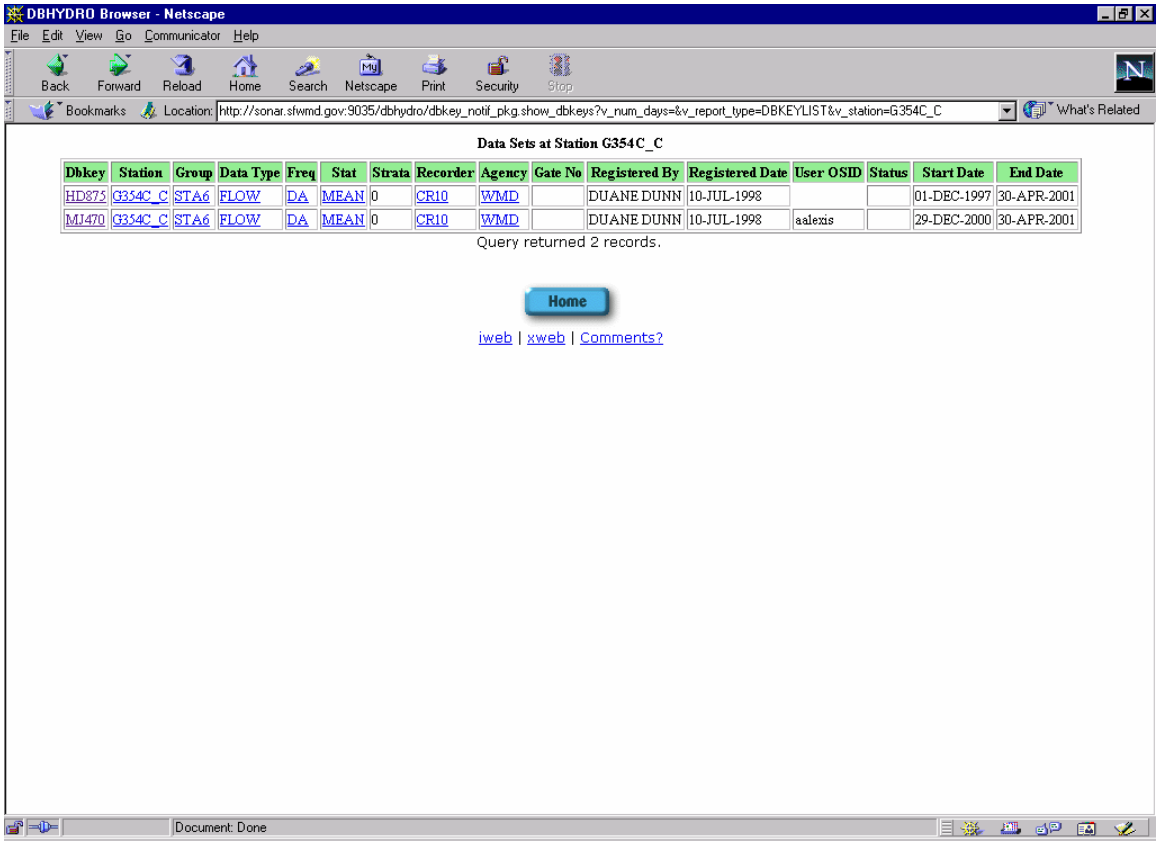


You may choose from a variety of report types, disciplines, and date ranges of interest. The following screen displays the results of a query of newly created data sets in the surface water discipline:



By selecting “Other Data Sets at Station” you can see what other time series are, or have been, measured at the station of interest.

All the ”headers” for each of the time series at the selected station are displayed here:



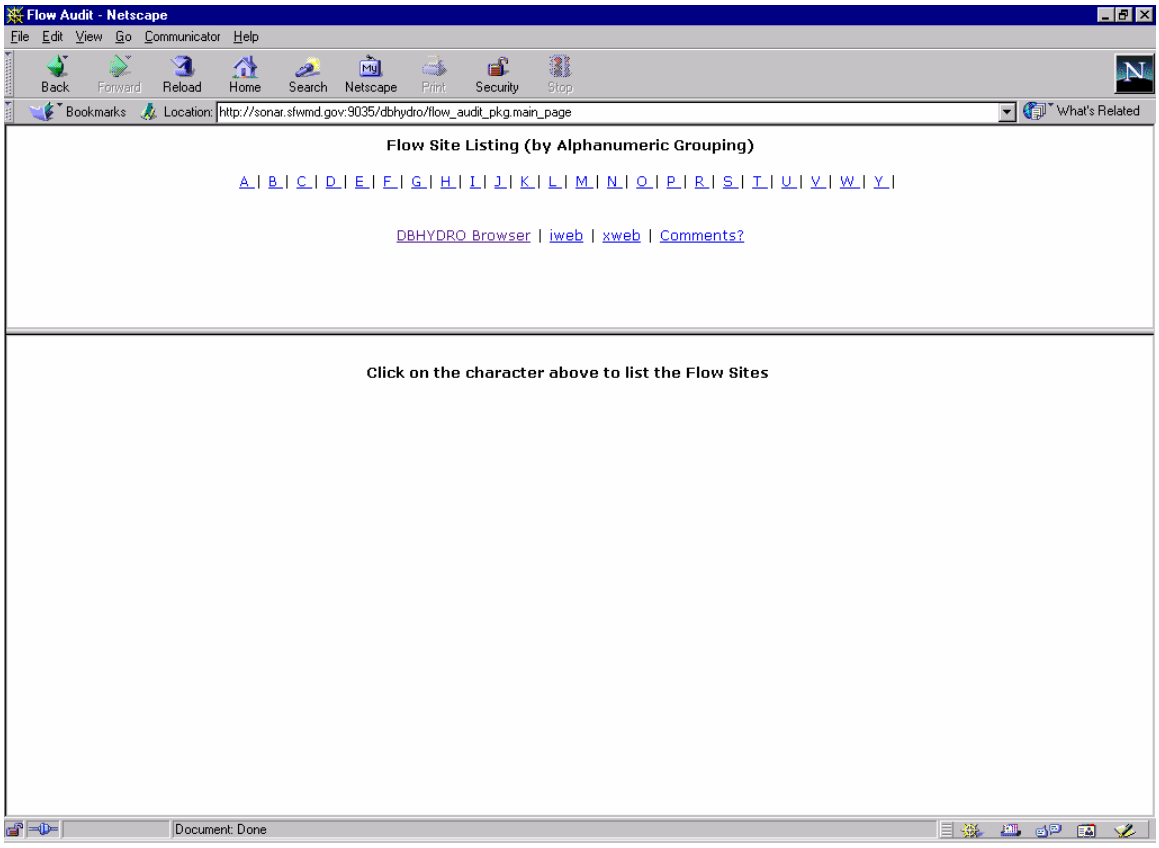
Flow Data Change Audit

This function is available on the SFWMD intranet only.

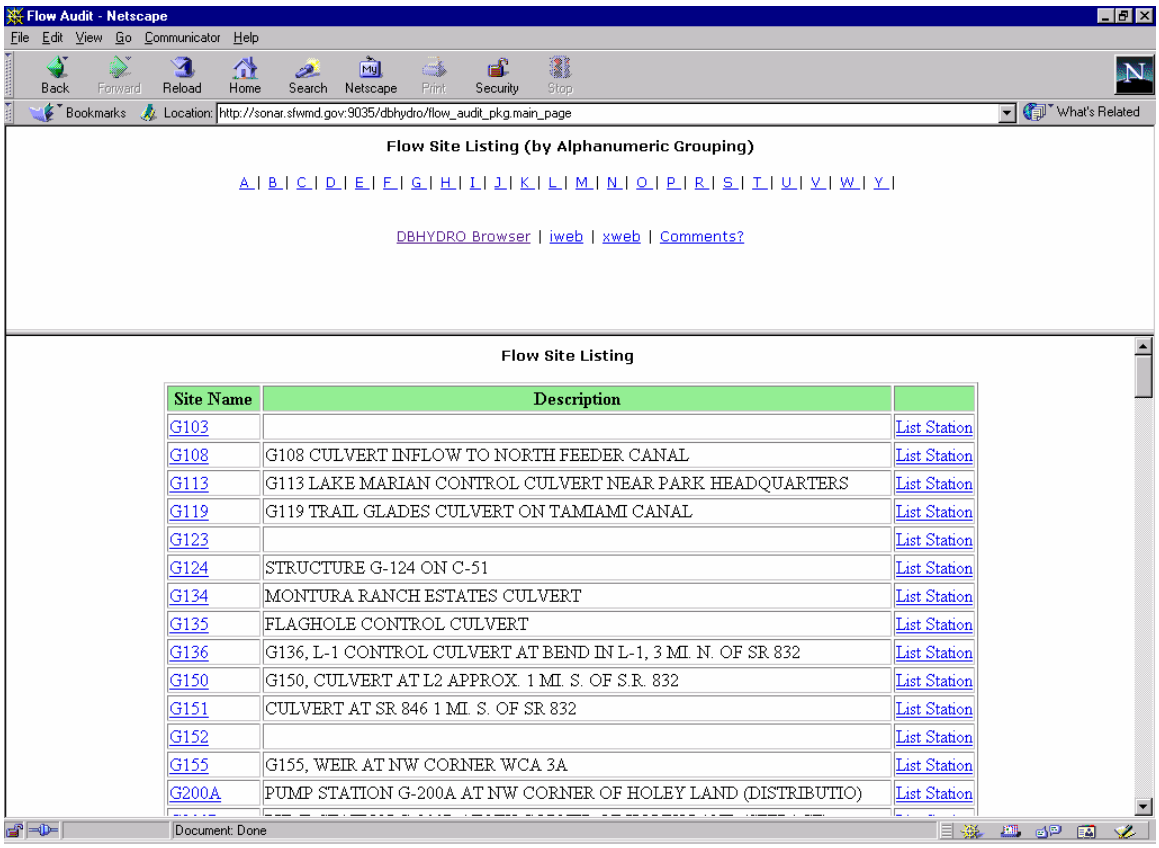
Sometimes it is necessary to make changes to flow data. These reasons for change include:

- Changes to the computer programs such as "FLOW" which are used to calculate discharge
- Changes to rating curves by which the flow is derived from water levels and structure operations.
- Datum adjustments due to more accurate survey information.
- Reprocessing of data to ensure adherence to Standard Operating Procedures
- Changes in structure geometry such as culvert diameter or gate width.

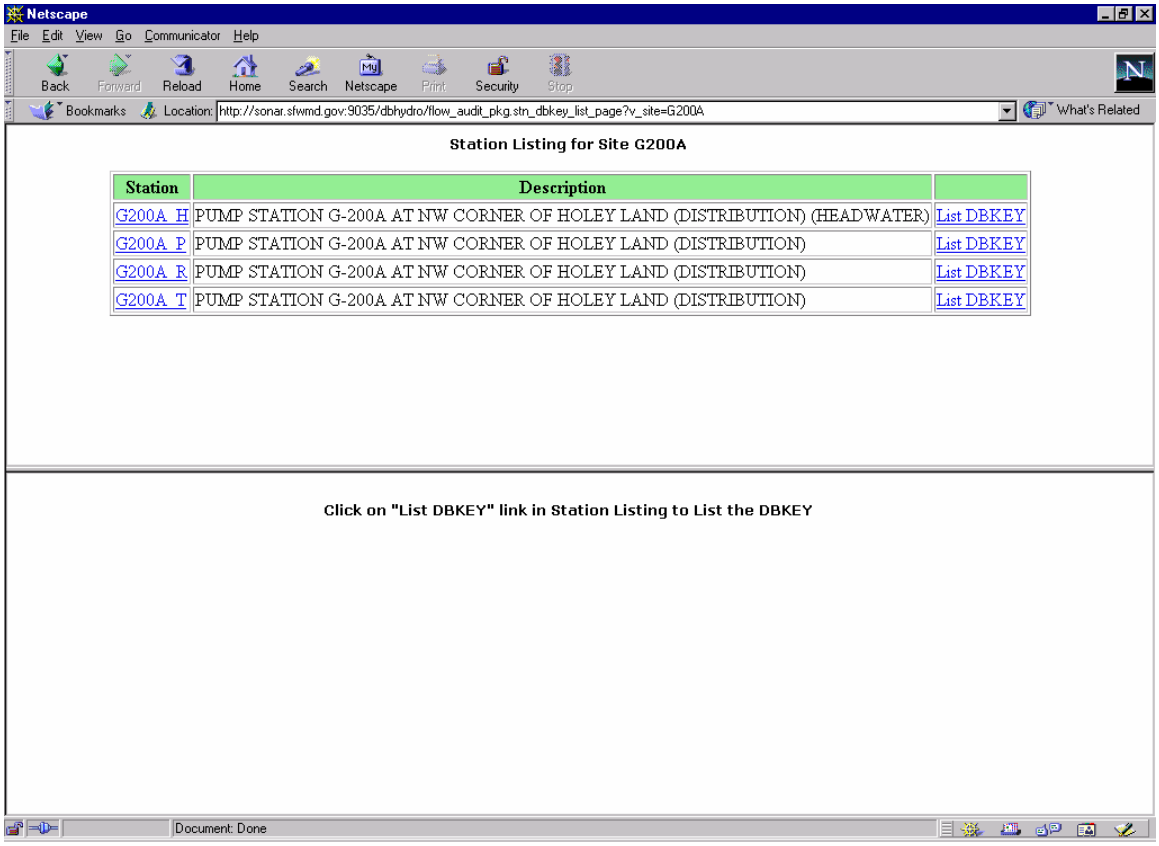
Upon selecting "Flow Data Change Audit" the user is presented with the following screen:



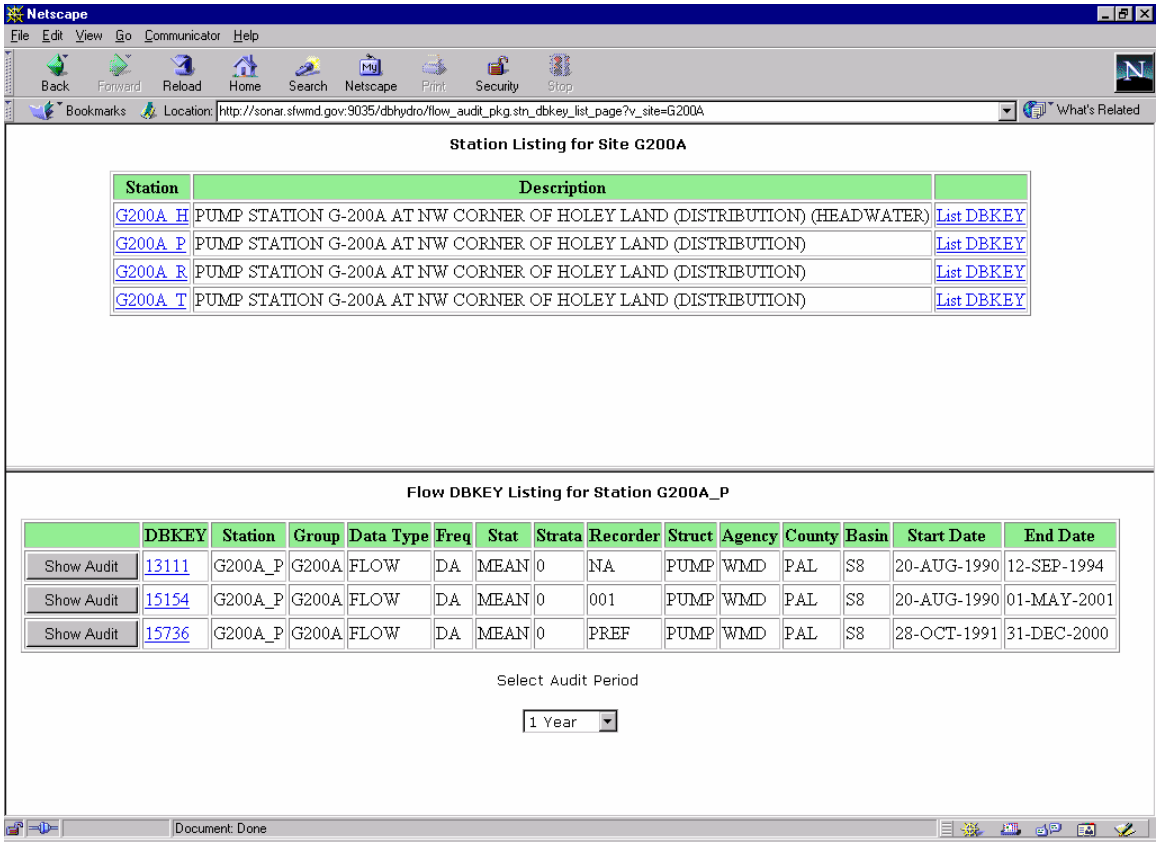
Choose the first letter of the site name in which you are interested.



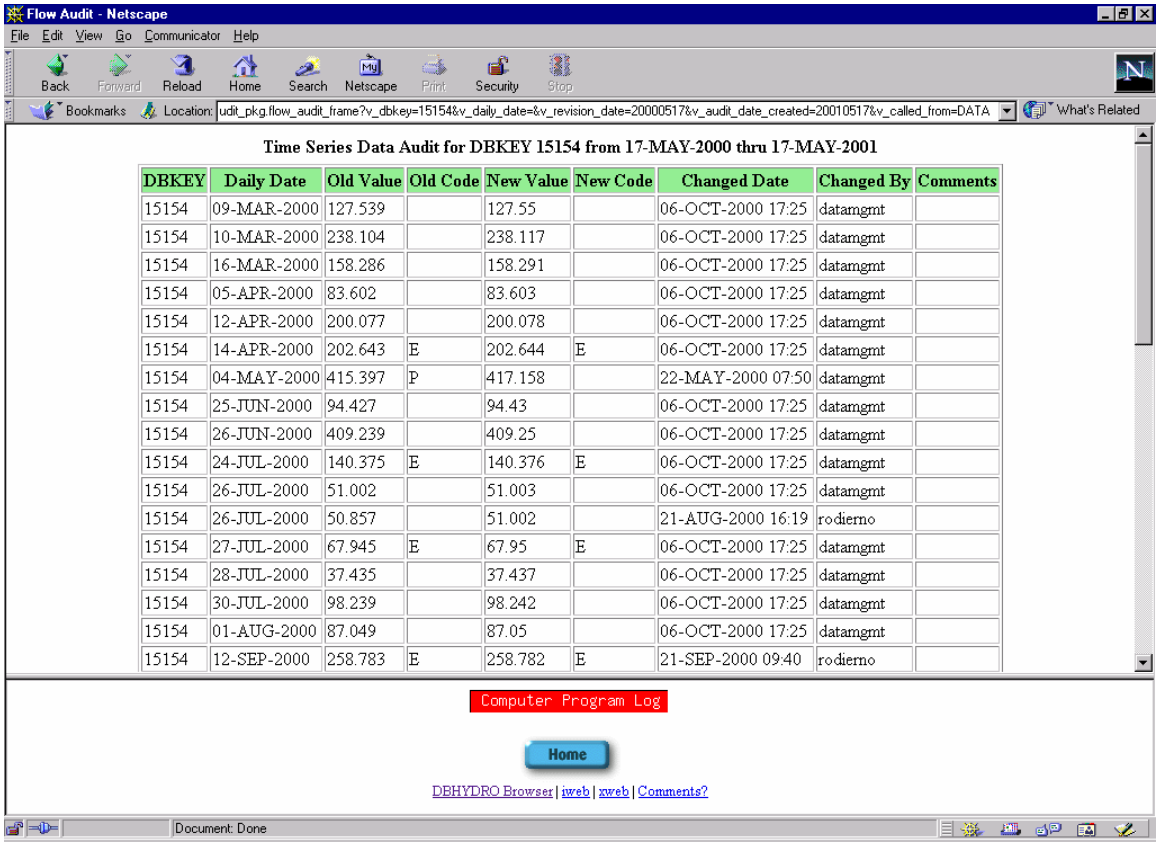
In this case, the letter “G” was selected. A list of sites containing flow data is presented in the bottom frame.
By selecting “List Station” the user will generate a list of all stations at the site.
These are the stations at site G200A:



By selecting "List DBKEY' for station G200A_P, a list of the flow data time series that are available in DBHYDRO is displayed in the bottom frame:



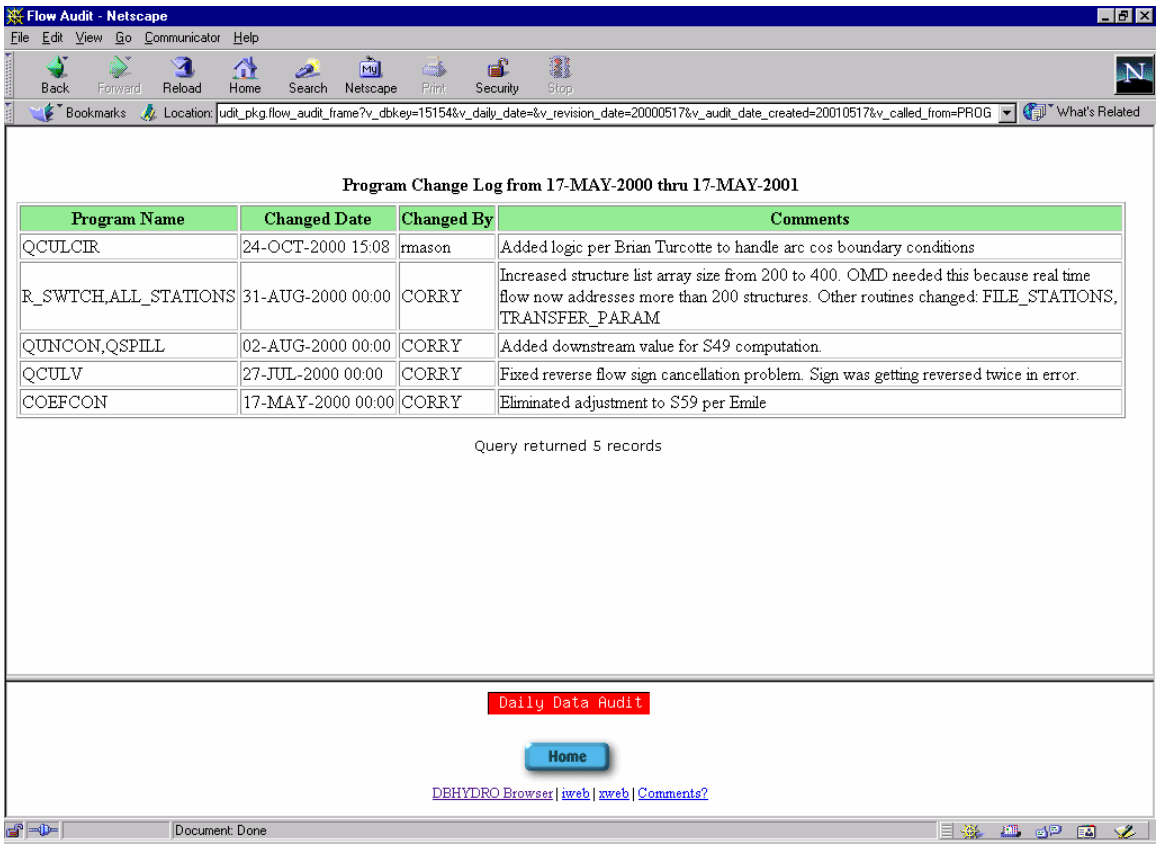
Select the desired audit period. In this example the last year's worth of audit records will be displayed.
Selecting the "Show Audit" button results in the following list of changes that have occurred to this data set:



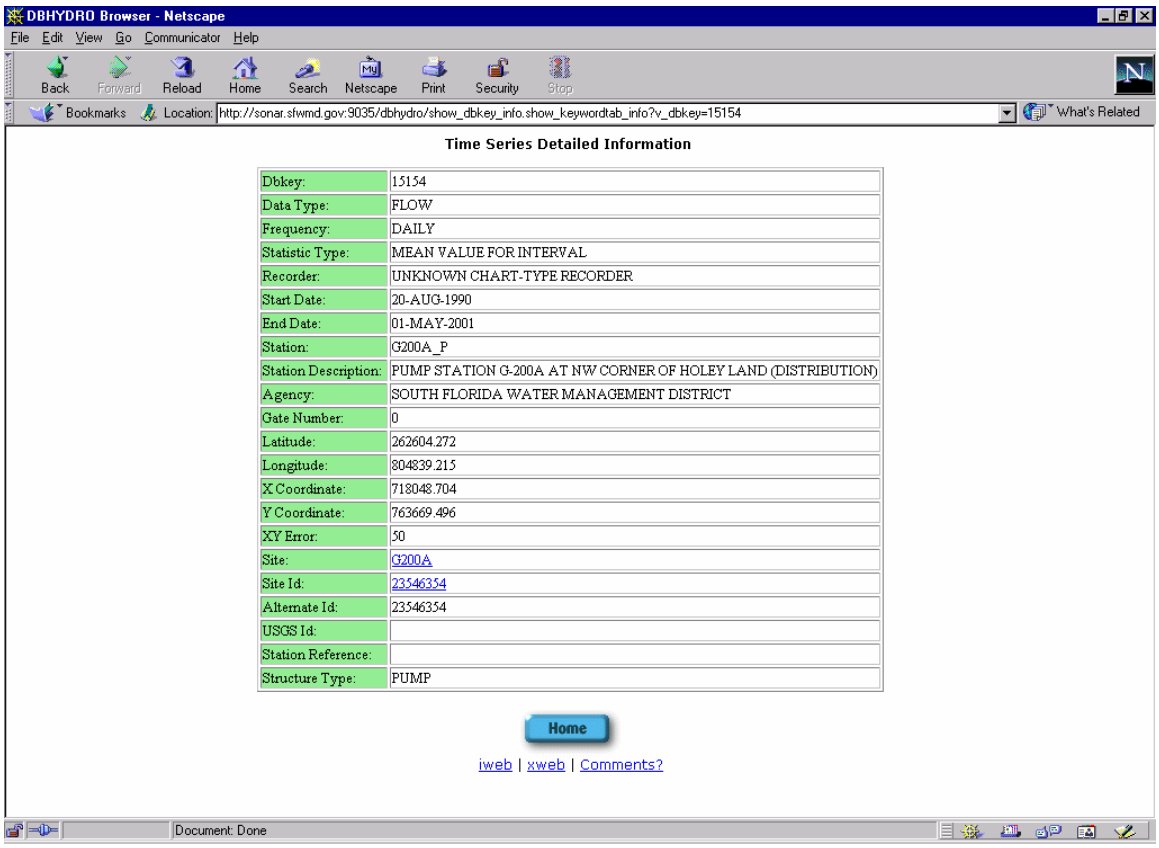
Time Series Data Audit for DBKEY 15154 from 17-MAY-2000 thru 17-MAY-2001

DBKEY	Daily Date	Old Value	Old Code	New Value	New Code	Changed Date	Changed By	Comments
15154	09-MAR-2000	127.539		127.55		06-OCT-2000 17:25	datamgmt	
15154	10-MAR-2000	238.104		238.117		06-OCT-2000 17:25	datamgmt	
15154	16-MAR-2000	158.286		158.291		06-OCT-2000 17:25	datamgmt	
15154	05-APR-2000	83.602		83.603		06-OCT-2000 17:25	datamgmt	
15154	12-APR-2000	200.077		200.078		06-OCT-2000 17:25	datamgmt	
15154	14-APR-2000	202.643	E	202.644	E	06-OCT-2000 17:25	datamgmt	
15154	04-MAY-2000	415.397	P	417.158		22-MAY-2000 07:50	datamgmt	
15154	25-JUN-2000	94.427		94.43		06-OCT-2000 17:25	datamgmt	
15154	26-JUN-2000	409.239		409.25		06-OCT-2000 17:25	datamgmt	
15154	24-JUL-2000	140.375	E	140.376	E	06-OCT-2000 17:25	datamgmt	
15154	26-JUL-2000	51.002		51.003		06-OCT-2000 17:25	datamgmt	
15154	26-JUL-2000	50.857		51.002		21-AUG-2000 16:19	rodierno	
15154	27-JUL-2000	67.945	E	67.95	E	06-OCT-2000 17:25	datamgmt	
15154	28-JUL-2000	37.435		37.437		06-OCT-2000 17:25	datamgmt	
15154	30-JUL-2000	98.239		98.242		06-OCT-2000 17:25	datamgmt	
15154	01-AUG-2000	87.049		87.05		06-OCT-2000 17:25	datamgmt	
15154	12-SEP-2000	258.783	E	258.782	E	21-SEP-2000 09:40	rodierno	

By selecting the “Computer Program Log” button one can see the history of software changes that have been made that may have been a factor in the changed data value or changed quality code:

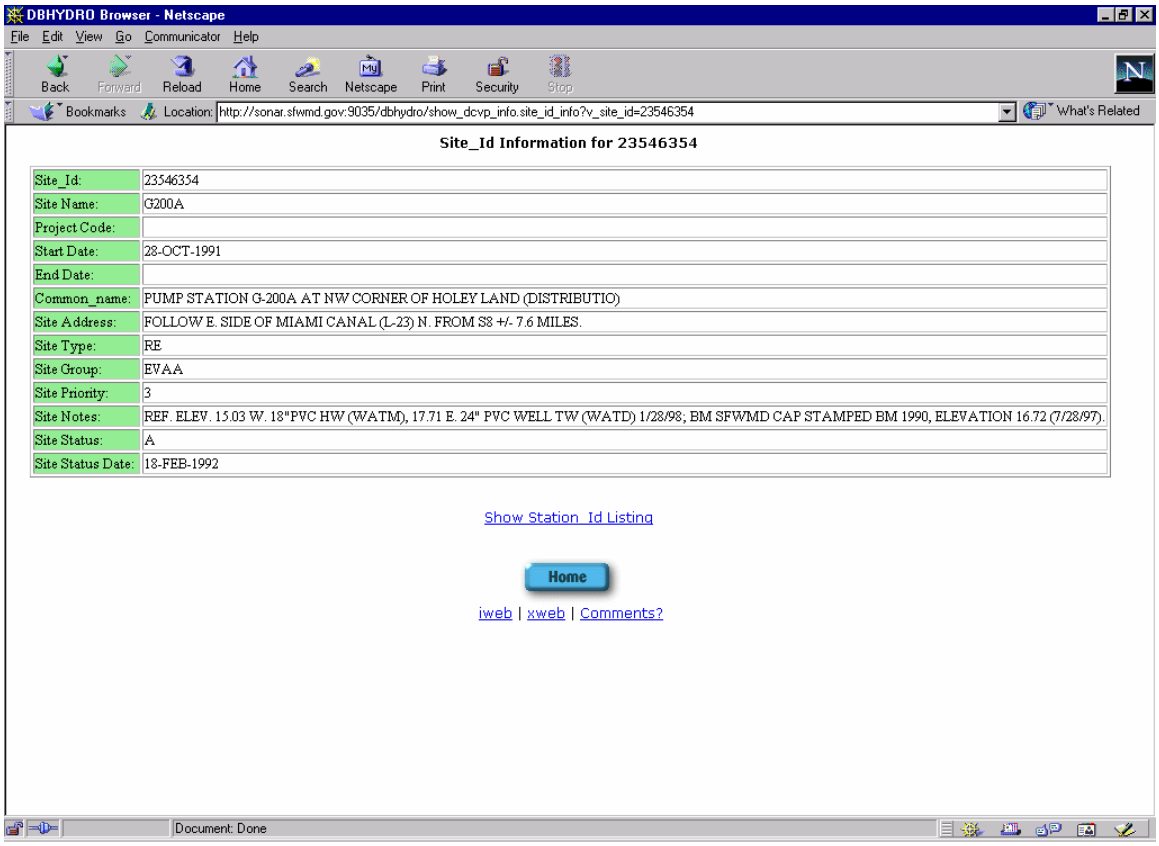


Selecting the dbkey 15154 from the “Flow DBKEY Listing” page results in the Dbkey Detailed Information screen:



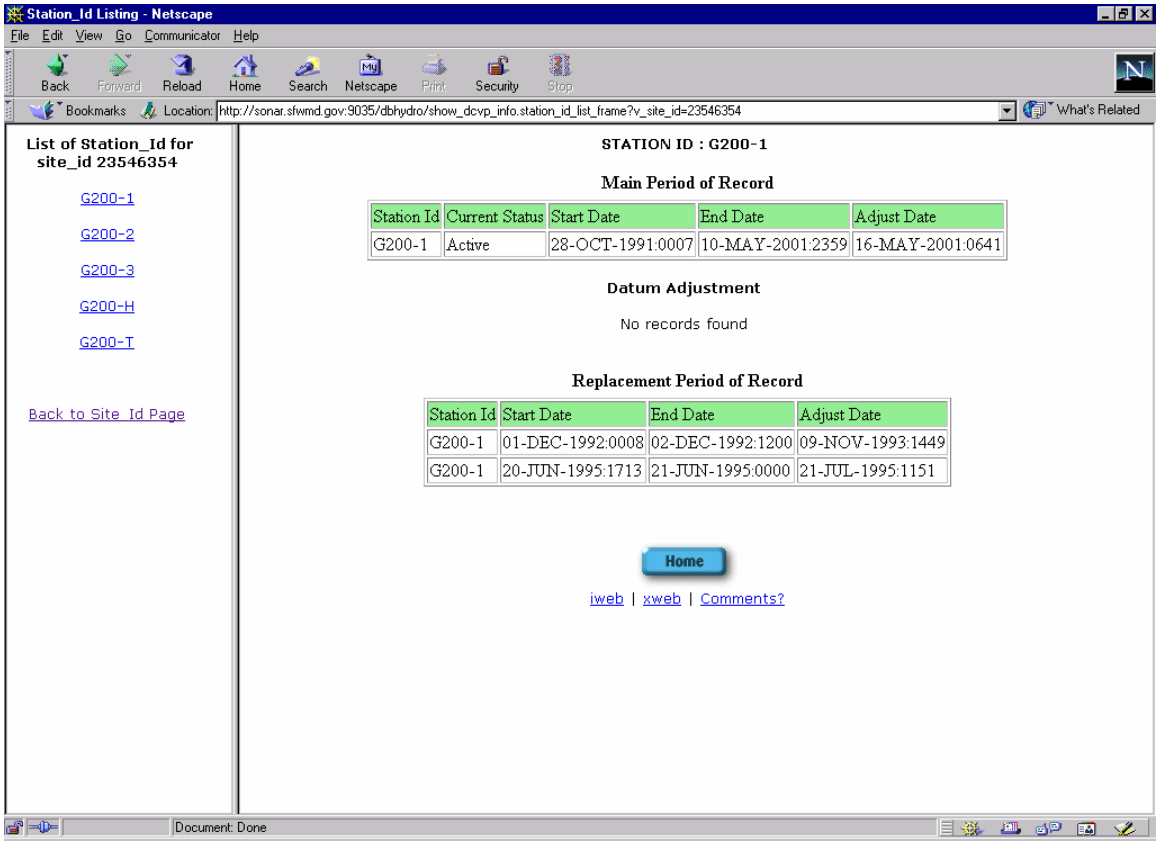
The site id field is hyperlinked to more detailed information about that site id.

Selecting the site id results in site information and the opportunity to show a station id listing:



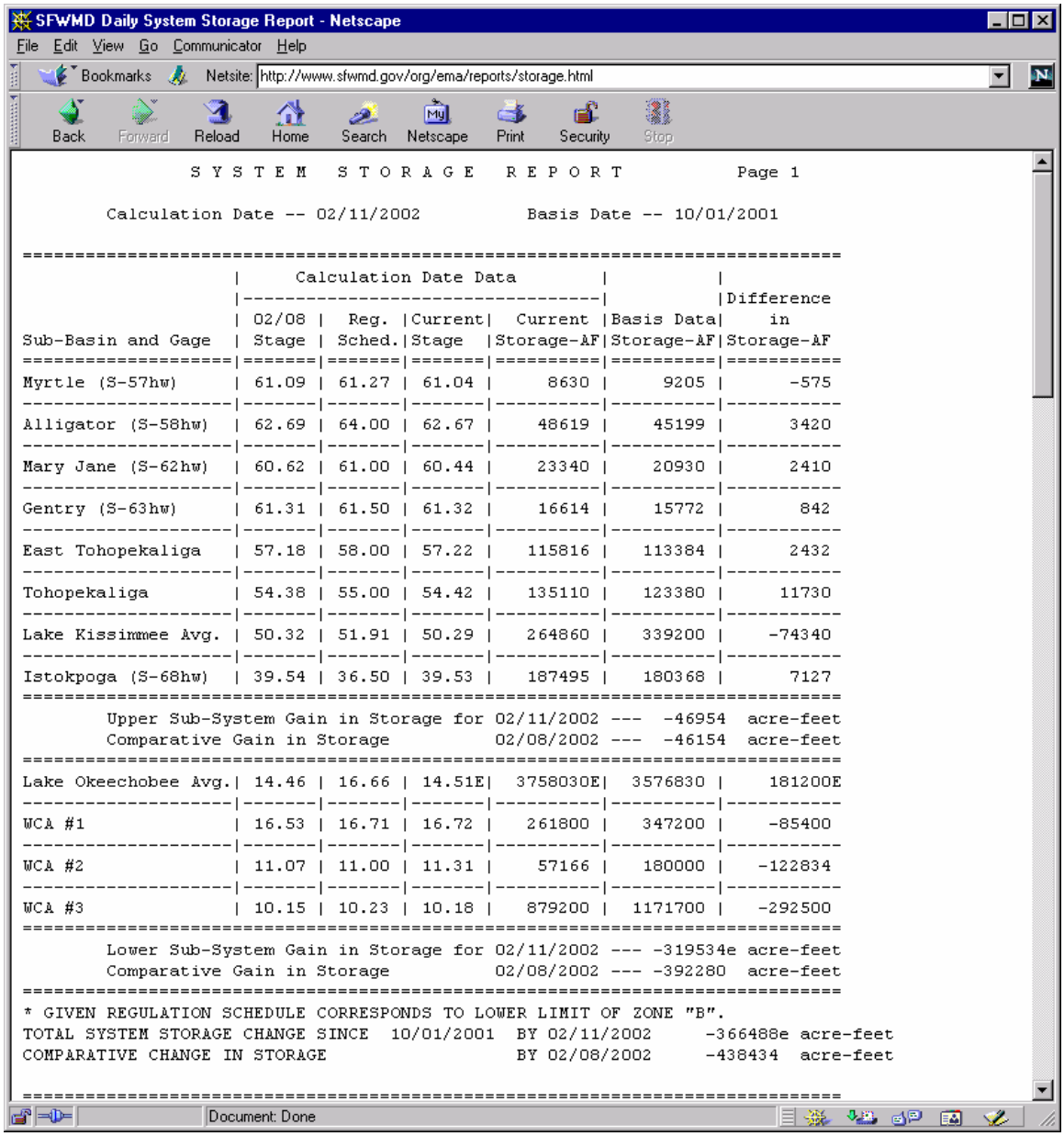
The station id listing gives the precise list of “raw data” time series that were used as input to the flow calculation process.

Selecting “Show Station ID Listing” results in the following screen:



Selecting a station_id on the left frame results in the associated period of record, datum adjustment, and replacement period of record information in the right frame.

SFWMD Daily System Storage Report



S Y S T E M S T O R A G E R E P O R T Page 1

Calculation Date -- 02/11/2002 Basis Date -- 10/01/2001

Sub-Basin and Gage	Calculation Date Data: 02/08 Stage	Reg. Sched.	Current Stage	Current Storage-AF	Basis Data Storage-AF	Difference in Storage-AF
Myrtle (S-57hw)	61.09	61.27	61.04	8630	9205	-575
Alligator (S-58hw)	62.69	64.00	62.67	48619	45199	3420
Mary Jane (S-62hw)	60.62	61.00	60.44	23340	20930	2410
Gentry (S-63hw)	61.31	61.50	61.32	16614	15772	842
East Tohopekaliga	57.18	58.00	57.22	115816	113384	2432
Tohopekaliga	54.38	55.00	54.42	135110	123380	11730
Lake Kissimmee Avg.	50.32	51.91	50.29	264860	339200	-74340
Istokpoga (S-68hw)	39.54	36.50	39.53	187495	180368	7127

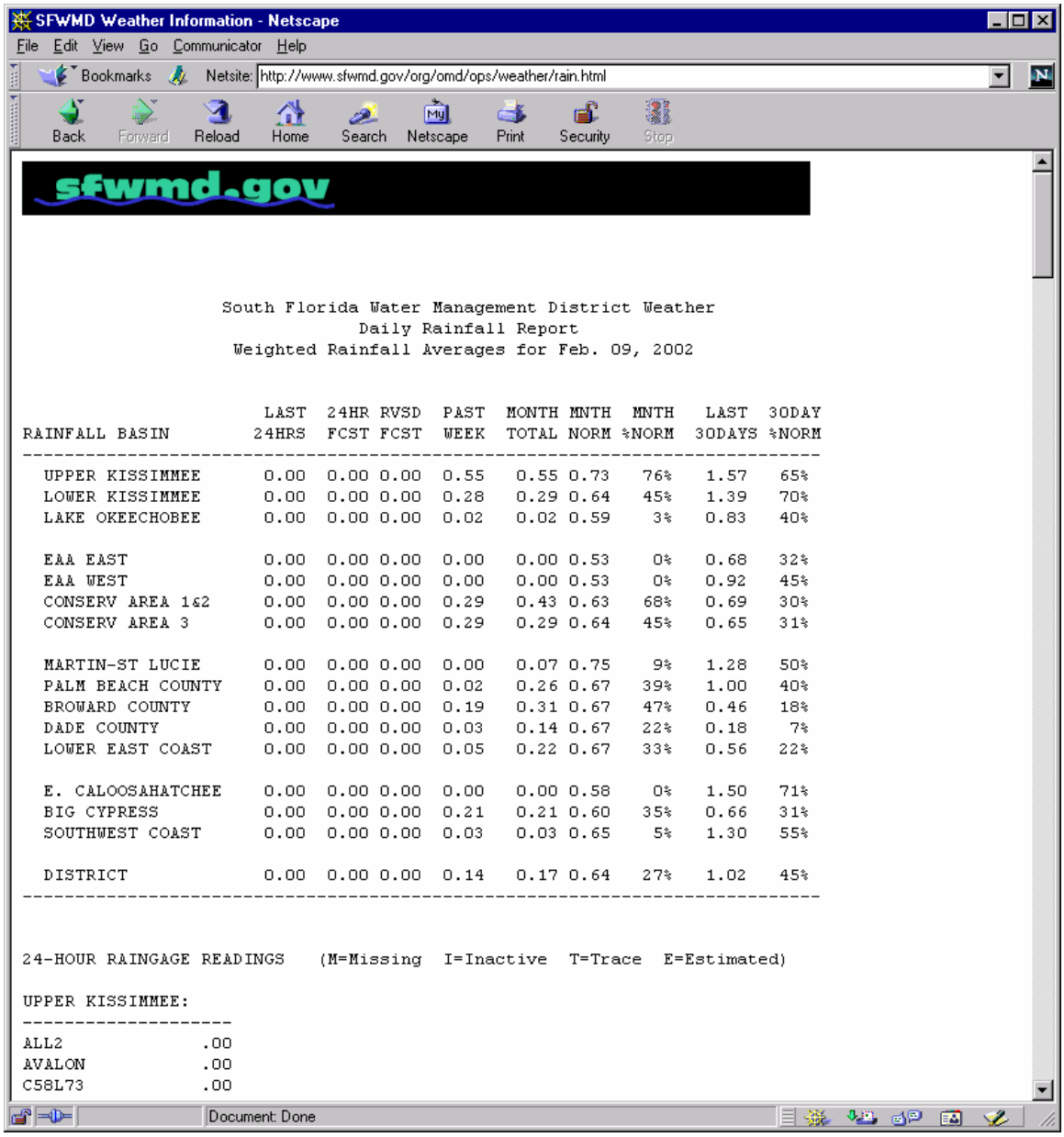
Upper Sub-System Gain in Storage for 02/11/2002 --- -46954 acre-feet
Comparative Gain in Storage 02/08/2002 --- -46154 acre-feet

Lake Okeechobee Avg.	14.46	16.66	14.51E	3758030E	3576830	181200E
WCA #1	16.53	16.71	16.72	261800	347200	-85400
WCA #2	11.07	11.00	11.31	57166	180000	-122834
WCA #3	10.15	10.23	10.18	879200	1171700	-292500

Lower Sub-System Gain in Storage for 02/11/2002 --- -319534e acre-feet
Comparative Gain in Storage 02/08/2002 --- -392280 acre-feet

* GIVEN REGULATION SCHEDULE CORRESPONDS TO LOWER LIMIT OF ZONE "B".
TOTAL SYSTEM STORAGE CHANGE SINCE 10/01/2001 BY 02/11/2002 -366488e acre-feet
COMPARATIVE CHANGE IN STORAGE BY 02/08/2002 -438434 acre-feet

District Daily Rainfall Report



South Florida Water Management District Weather
Daily Rainfall Report
Weighted Rainfall Averages for Feb. 09, 2002

RAINFALL BASIN	LAST 24HRS	24HR FCST	RVSD FCST	PAST WEEK	MONTH TOTAL	MNTH NORM	MNTH %NORM	LAST 30DAYS	30DAY %NORM
UPPER KISSIMMEE	0.00	0.00	0.00	0.55	0.55	0.73	76%	1.57	65%
LOWER KISSIMMEE	0.00	0.00	0.00	0.28	0.29	0.64	45%	1.39	70%
LAKE OKEECHOBEE	0.00	0.00	0.00	0.02	0.02	0.59	3%	0.83	40%
EAA EAST	0.00	0.00	0.00	0.00	0.00	0.53	0%	0.68	32%
EAA WEST	0.00	0.00	0.00	0.00	0.00	0.53	0%	0.92	45%
CONSERV AREA 1&2	0.00	0.00	0.00	0.29	0.43	0.63	68%	0.69	30%
CONSERV AREA 3	0.00	0.00	0.00	0.29	0.29	0.64	45%	0.65	31%
MARTIN-ST LUCIE	0.00	0.00	0.00	0.00	0.07	0.75	9%	1.28	50%
PALM BEACH COUNTY	0.00	0.00	0.00	0.02	0.26	0.67	39%	1.00	40%
BROWARD COUNTY	0.00	0.00	0.00	0.19	0.31	0.67	47%	0.46	18%
DADE COUNTY	0.00	0.00	0.00	0.03	0.14	0.67	22%	0.18	7%
LOWER EAST COAST	0.00	0.00	0.00	0.05	0.22	0.67	33%	0.56	22%
E. CALOOSAHATCHEE	0.00	0.00	0.00	0.00	0.00	0.58	0%	1.50	71%
BIG CYPRESS	0.00	0.00	0.00	0.21	0.21	0.60	35%	0.66	31%
SOUTHWEST COAST	0.00	0.00	0.00	0.03	0.03	0.65	5%	1.30	55%
DISTRICT	0.00	0.00	0.00	0.14	0.17	0.64	27%	1.02	45%

24-HOUR RAINGAGE READINGS (M=Missing I=Inactive T=Trace E=Estimated)

UPPER KISSIMMEE:

ALL2	.00
AVALON	.00
C58L73	.00

Enhancements

A variety of enhancements are underway. Major updates occur on a quarterly or more frequent basis.

Contact Brian Turcotte by phone at 561-682-6579 or email at bturcott@sfwmd.gov to discuss or request ideas for improvement.

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SOUTH FLORIDA WATER MANAGEMENT DISTRICT
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